Where I can help you

Either mobile, web or appliance, available skillets include creating new applications from concept to deployment, enhancing existing applications, application support, and integration with various backend systems in the form of:

- **Advisory** - You know what your problem is, but not sure solve it with technology.

- **Development** - You know what you would like to build, and need assistance.

- **Support** - You have an applications which may need support & minor development.

How would you benefit

Whether working with an existing team or providing the exclusive technical expertise for a project; I am able to satisfy your requirements with three major benefits:

- **Independent** - Feel confident in knowing that Development and Support are on auto pilot so that you can focus on your business.

- **Flexible** - Having worked with many technologies, I'm able to integrate and innovate into your existing teams and technical environments, quickly.

- **Personable** - Easy going with a knack for explaining complex problems, simply.

Technologies

Backend Systems & Frameworks

Languages: Ruby, Groovy, Java, C/C++, Python, shell, PHP, Javascript, HTML/CSS, XML, SQL

Frameworks: Rails, Grails, Java / Spring, React

Databases: MySQL, Postgres, Redis, Sidekick

Environments: Unix, Linux, FreeBSD, AWS

Mobile Development & Services

Languages: iOS - Obj C, C / C++, Swift

Devices: Raspberry Pi, Buildroot, LVGL

Other

Version Control: Subversion, Git, CVS, GitHub

Tools: Capistrano, Make, Gradle, Ant, Cocoa Pods, Selenium

Testing: Expecta / Cedar / Spock / RSpec

Applications: Apache, Passenger, Tomcat, Wordpress, AWS, ElasticSearch

NEiLAB

JAMES WHITFIELD
full stack / web / mobile app development

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Thinker . Developer . Water

Over a decade of full stack development experience in areas web backend and mobile applications

About me and my philosophy on life and technology

To paraphrase a great philosopher Bruce Lee, I endeavor to be shapeless, formless, like water. Which is to say I endeavor to be what is necessary for the task at hand, by utilizing the technology available, to solve any given problem within time constraints, for the wonderful people I serve in addition to their customers. To me this is what it means to take the shape of your container, as Tech is ever changing and fluid, like people, their desires and circumstances. Thus to be a consistent solution you must be shapeless, formless, like water my friend :)

* Interactive news chat application for iPhone & iPad

Mobile App Development

From concept, implementation to support, I'm able to assist you with development and maintenance of applications for your phone and tablet, with a specialty in apple devices using **Swift & Objective C**.

This includes data driven business applications, media applications, message based applications like twitter and more. Because I'm not exclusively a mobile developer, I'm able to offer expert integration with other backend services, or proprietary in-house systems that you may posses; allowing your users to benefit from every aspect of your existing or new backend solutions, but using mobile devices.
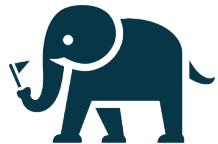
* Enterprise Sharepoint turned mobile responsive

Web App Development

Web Applications are often the heart of any online presence or internal workflows. They help facilitate the interactions between personnel, customers & delivery of products & services, and serve as the backbone of many mobile applications.

Fortunately, much of my professional experience has been architecting and building such applications, for various platforms, both internal and customer facing; integrating with both proprietary & standard systems. This has included areas of sales, marketing, analytics, workflows, CMS's, payment gateways, and cloud services, while often utilizing **Ruby on Rails, Java & Spring, Grails, and React**.

Social photo sharing application designed to allow collaborative contributions to your private and public events
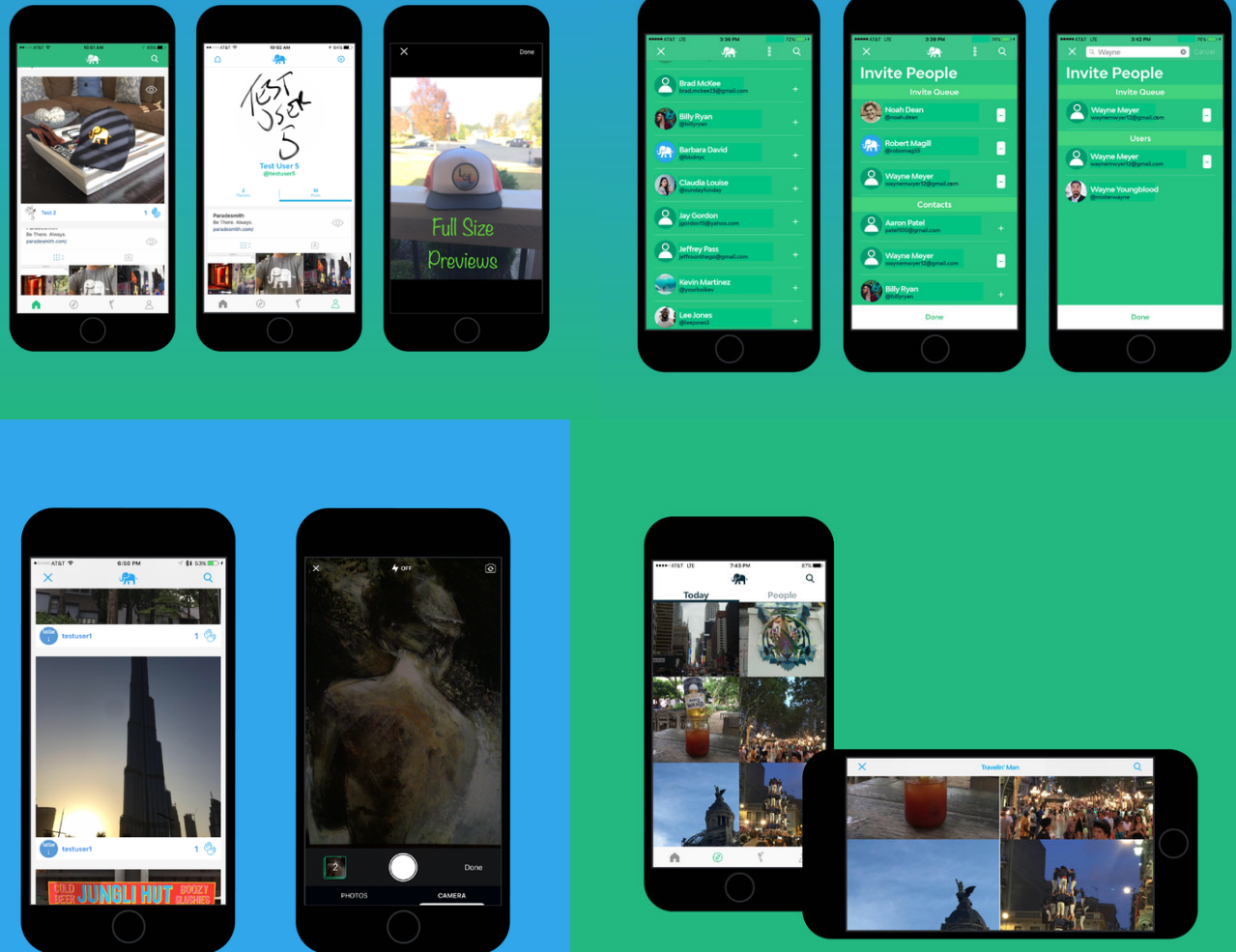
Need assistance building a social app like Instagram?

Designing the latest social application can be challenging, as it requires expertise in both mobile and web development, which I've successfully leveraged when building applications such as Paradesmith, a collaborative photo album designed to utilize contacts, photos, and messaging; all in a manner that can scale to meet the overnight demand of an instant success, by utilizing **AWS, Lambda & S3** infrastructure and performant enterprise frameworks such as **Java / Spring / Grails, Swift and Objective C**. Altogether, forging a backend, as strong as the frontend.

Paradesmith

Streamline your business with Digital Automated Workflows. Reduce turnover, training and increase retention with your own CRM, designed to easily visualize customer value, and customizable processes that guide agent and customer interactions.
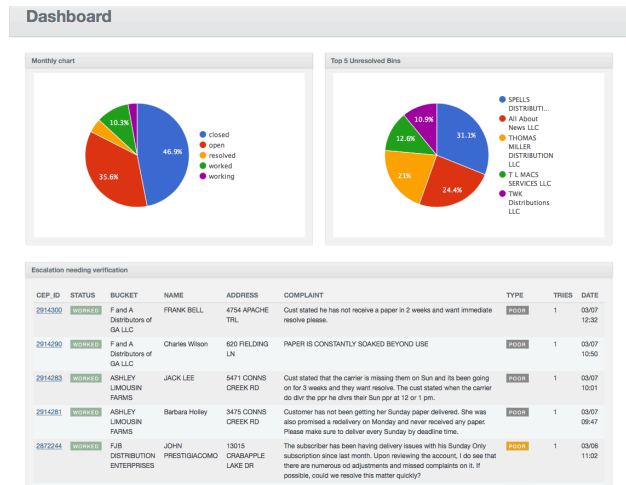
About Digital Workflow Automation

Digital workflow and content automation replaces manual and paper-based processes by integrating tools, automating hand-offs and replacing other repetitive tasks with those that can be consistently guided by a computer or mobile device via a series of user interfaces embodying steps tailored for your business and the tasks at hand. This minimizes training, increases consistency, and raises performance by reducing waist and streamlining cooperation between staff, vendors and customers.

Dashboard of automated system for managing customer issues and their resolution

Custom CRM Solutions

For the Fortune 500, I've utilized **Ruby on Rails** to develop web portal(s) that provide customer service representatives a 360 view of customer data to easily assist in managing accounts using prescribed & configurable workflows via admin, which help alleviate the need to remember the best resolutions to customers problems or request, that were often unique to their location or product types.

While there are packaged CRM solution on the market which work well, occasionally you need a solution tailored to your specific needs, to support unique scenarios outside common software capabilities that serve the general marketplace.

Need workflow Automation?

If there are repetitive tasks that consumes much of your time, or the business rules are sufficiently numerous or difficult to follow, digital workflow automation can be of great help.

With a custom solution to automate your workflows, we can develop web or mobile solutions that ensure the integrity of the process at each phase; allowing you to work with certainty as you proceed through each step, saving time, money and a great deal of stress. Additionally, automated workflows are easier to learn, allowing new hires or existing ones, to execute your business with same precision.

Modernize your legacy electronic appliances with Touchscreen Graphical User Interfaces and access to the Internet of Things via Raspberry Pi

Need an electronic appliance to integrate with the world?

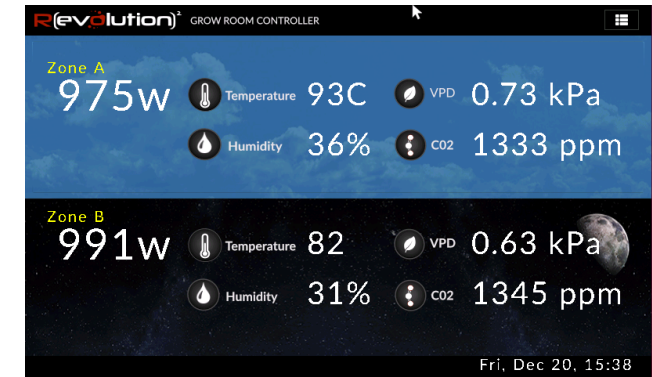Keeping pace with modern electronics can be difficult and ever changing, and as customers begin to expect more from their appliances, old devices will have to be updated to remain relevant. Usability is no longer limited to moving from text to graphical interfaces. They instead must now be operated by touch, have access to the internet, and be controllable from anywhere in the world, via your mobile app or web site. Need assistance building tangible solutions you can touch, let's discuss the details, I'm happy to assist.

* Original text base controller interface

* New graphical touch controller interface

Classic Grow Room Controller

Every green room needs lights, and a light switch isn't enough for industrial grow operations. Thats where the first generation, RLC1 Digital Lighting Controller, comes in, which can can simulate sunrise and sunset, gradually warm up your plants just as Mother Nature does, while also featuring brown-out / black-out detection and timing for optimal light restart, and can even sense when temperatures in your indoor garden are too high and can automatically respond by dimming your lamps thereby mitigating environmental stress and crop damage.

To Internet Appliance

Using the worlds smallest and most popular Linux computer, the Raspberry PI, an old lighting controller became a new and more versatile appliance that was also easier to use.

Utilizing the **C programming language** and the **Buildroot** framework to create a custom **Linux OS** specific to the task, the appliance has additionally, networking for control through wifi, calibration interfaces for a more accurate touch, software updates via the internet, and redesign & integration of the old system functionality, with a more relevant and modern decor.

References

Happy clients are one of the best ways to evaluate a potential candidate.

Stacy Lynch
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Paradesmith
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Open Source

When I design, I like to do so in a reusable way as to benefit my subsequent projects and the Open-Source community as a whole, as I likewise benefit through similar efforts in in the projects of others.

Git-Hub
https://github.com/neilabdev/

VinylRecord
https://github.com/neilabdev/VinylRecord
ActiveRecord for iOS without CoreData, only SQLite
+4000 downloads

NEIApplicationConfig
https://github.com/neilabdev/NEIApplicationConfig
Allows iOS developers to have configurations defined in a config file per environment & bundle identifier, which makes deployment and testing multiple versions easier. 300+ downloads

iDelayedJob
https://github.com/neilabdev/iDelayedJob
iOS implementation of Delayed Job for rails which is a database based asynchronous priority queue system. 1000+ downloads

Peekaboo
https://github.com/neilabdev/Peekaboo
iOS API which allows you to easily use a ScrollView to automatically hide the navigation and toolbars (and more).

BcmsLdapAuth
https://github.com/neilabdev/bcms_ldap_auth
Provides ability to authenticate Ruby on Rails BrowserCMS against active directory (or LDAP generally).

Projects

From web application to mobile device; below are some recent solutions I have implemented.

Paradesmith
parademsith.com - iOS / Swift / Obj C / Grails / Java / AWS / ElasticSearch
Designed social photo sharing application to allow collaborative contributions to your private and public events. It allows creation of a photo album, which you can send invitations via contacts to join and contribute photos; or if the album is public, users of the app can browse, join, and contribute themselves.

Venttastic!
venttastic.com - iOS / Obj C / Grails / Java / AWS
Implemented fun & educational iOS social news app which allows users to aggregate content themselves, annotate websites, in addition to offering commentary on any page, in the form of tomatoes in your face of those you disagree and beers for those you do.

Customer Assistance Portal
Cox Media Group - Ruby on Rails / Apache / Linux
Created a Customer Relationship Management web application to provide a representative a 360 view of customers data to easily assist them in managing their account using prescribed and customizable workflows.

Complaint Resolution Portal
Cox Media Group - Ruby on Rails / Apache / Linux
Implemented web application portal to help track and escalate customer complaints to aid in facilitating their resolution & reporting.

Touch Grow Room Controller
Revolution Micro - C / BuildRoot / Raspberry PI
Integrate with embedded solutions to transform a classic text based lighting controller appliance into an easy to use touch based graphical interface utilizing the Raspberry Pi.

NEILAB, LLC - JAMES WHITFIELD

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SUMMARY

With many years of web and mobile application development experience, I'm seeking opportunities in either web application or iOS mobile development.

Skills

Languages

Proficient in: Ruby/Rails, Grails , Groovy , Java / Servlet / Struts / JSP, Groovy, C / C++, Swift, Objective C, PHP, Perl, Python, Shell scripting, Javascript, SQL, HTML, CSS and XML

Software

Database: MySQL, PostgreSQL, MongoDB, ElasticSearch, SideKick

Applications: Apache, Passenger, Tomcat, Wordpress, AWS

Frameworks: Rails, Grails, Spring, Struts, Cocoa, UIKit, React JS

Tools: Capistrano, Make, Gradle, Ant, Cocoa Pods, Git, CVS, Subversion, Homebrew

Testing: RSpec, Expecta / Cedar (iOS), Spock (Java/Grails), JUnit

Platforms: Unix / Solaris / Linux / BSD, Mac OS X, Microsoft Windows, iOS

Experience

SR WEB DEVELOPER, BIG SOUTHERN SOFTWARE **– 2021 - PRESENT** CONTRACT
RUBY RAILS / Javascript / Prawn / Stimulus / JsTree / RSpec

- Created Web Workflow Automation system for use in streamlining the creation of Educational Courses for Students learning Computer Science (Think Khan Academy). This comprised of using **JsTree** for creating course structure, **Wicked** gem for course navigation, and TurboFrames for section/tab navigation.

- Implemented a **"**Picture Perfect" **PDF**'s using a custom DSL backed by **Prawn** to produce aesthetically pleasing course material that matched exactly, supplied prototyped print designs, with support for pagination, wrapping, and WYSIWYG HTML support.

- Integrated **OpenAI** to assist course creators with generating baseline content, which included a pseudo scripting language using xhtml markup for logic tags (with Nokigori) to allow course authors to conditionally tailor A.I. results (e.g. <if test=""></if>) .

SR WEB DEVELOPER, JADEMIND **– 2020 - 2021** CONTRACT

RUBY RAILS / Stripe / OmniAuth / DelayedJob

• Designed and implemented, CalendarWorks, a API as a Service, which allows users to connect to their third party calendars via a unified REST API to enable reading and writing of events. This comprised creating intermediate modules that encapsulated each vendors calendaring API, which were scheduled as a job to retrieve and synchronize without duplication, heterogeneous events, allowing a unified view of a persons entire schedule across platforms from a single dashboard, along with account registration, management, and payment tiers via **Stripe**.

SR WEB DEVELOPER, COX MEDIA GROUP **– 2013 - 2019** CONTRACT

RUBY RAILS

• Created CMS application using BrowserCMS for use in importing Microsoft Sharepoint enterprise wide content via Feed Manager designed using ActiveAdmin, which incorporates the Sharepoint API and Nokogiri for HTML scraping to allow responsive design of existing Intranet site for mobile devices. Designed BrowserCMS LDAP gem module/driver to allow authentication and importing of users via ActiveDirectory for employee directory search.

• Created a web analytics application for housing and categorizing internal circulation reporting data with a comprehensive search ability using Solr search engine and ActiveAdmin for the backend interface.

• Created a Customer Relationship Management web application to provide a representative a 360 view of customers data to easily assist them in managing their account using prescribed and customizable workflows.

• Implemented web application portal to help track and escalate customer complaints to aid in facilitating their resolution & reporting.

SR WEB DEVELOPER, INCOMM **– 2011 - 2013** CONTRACT

RUBY RAILS / JRUBY / R-SPEC / GIT / AWS / MongoDB / Memcache

• Maintained INCOMM payment application for online video games (think Paypal with virtual currencies). Duties included troubleshooting, bug fixes as well as enhancements to the rails application in an agile CI environment whose development workflow surrounded GitHub's peer review process via pull request. Routinely focused on enhancements to backend merchant API's as well as maintained the billing system used to pay merchants their percentages using contractual business rules.

- Created application to allow printable loyalty cards with UPC codes to be scanned and purchased at the register. Cards could be branded per merchant, who's layout could be configured via DSL, where it was finally rendered as PDF or JPG for the customer to print using R-Magic.

- Ported Ruby's XML-SEC library to JRUBY by replacing c libraries with their java equivalent in order to allow application to run on JRUBY.

SR PROGRAMMER ANALYST, ATLANTA JOURNAL CONSTITUTION **– 2006 - 2011** CONTRACT
RUBY RAILS / JAVA / FLEX / PERL DEVELOPER

- Created multiple Ruby Rails Web Application(s) to allow customers to register and create / edit classified Ads and optionally insert their online Ads into newsprint system using it's proprietary XML/RPC. Product included user registration, account administration, Ad management & presentation interfaces, with payment via paypal API.

- Designed and implemented newspaper subscription application using Flex to communicate user registration info in XML to .NET backend. Additionally, refactored .NET backend application and ported it to Ruby/Rails with backwards compatibility to save hosting cost.

- Reverse engineered and ported ASP application used used to communicate with backbend Print API in Ruby to allow scheduling of Print Ad's in the newspaper via Rails application.

PROGRAMMER ANALYST / SR. UNIX ADMIN, UNIVERSAL PARCEL SERVICE **– 2000-2005** PERMANENT
JAVA / SERVLET / STRUTS / BASH and SOLARIS ADMIN

- Designed UPS first search engine application written in Java/Servlet/JSP/Struts/log4j and companies proprietary framework. The prototype utilized Apache Lucene API (Search Engine API) and the production using a 3rd party solution.

- Lead a team of developers to Designed & develop the "International Forms" application which allowed users to auto populate PDF forms which were later printed for use in shipping. This application written in java/Struts and used 3rd party PDF API.

- Developed "SmallBiz" web application which was a questioner application that would ask users questions about their shipping habits and provide recommendations for company solutions.

- Modified Apache JMeter (A load performance tool written in Java) for use with content validation of the new release of the production UPS.COM site look&feel. Included designing UI in Swing and saving validation results in SQL database using JDBC (for Orcale).

- Architected Unix Infrastructure, which included the ability to build Solaris servers automatically using "JumpStart" (bourne shell) scripts and implemented backup/restore procedures and wrote the driver that interfaced with backup tape library (shell/IPC) in addition to remote management architecture.

Education

Southern Polytechnic University – Computer Science Major , 2004

START-UP

SR IOS DEVELOPER, PARADESMITH! **– 2017 - 2020** BOOTSTRAP

iOS / SWIFT / Objective C/C++ / CocoaPods / Grails / JAVA / ElasticSearch / AWS

- Designed & Implemented social photo sharing application to allow collaborative contributions to users private and public events, via photo albums called parades, where users can publish and invite others to contribute photos, videos, and commentary.

- Applications utilized Apple Push Notifications, AVKit for video playback, background Bulk and Large Uploads to web application and S3, Video Streaming, and media tagging & search.

- Designed backend web application using Grails / Java/ Spring, Postgres and ElasticSearch.

    see @ **http://paradesmith.com**

SR IOS DEVELOPER, VENTTASTIC! **– 2015 - 2017** BOOTSTRAP

iOS / Objective C/C++ / CocoaPods / Expecta / Grails / Rails / Selenium / AWS

- Implemented commentary based news aggregation app for iPhone/iPad which was designed to place emphasis on what people think about content, via unique rating system and user comments that utilized fun punctuations such as olive branches, beers and tomatoes which combine to affect the scores of other commenters.

- Users may share articles via email / Facebook / twitter or text & receive chat notifications

- Designed feed manager in Rails/Selenium import content directly from specified websites with our with RSS. Includes algorithm to detect where content is in a page, and separately provides a rule system to specify where content is for specific domains.

SR ARCHITECT / DEVELOPER, IC2MEDIA, LLC **– 2013 - 2014** BOOTSTRAP
iOS / Objective C/C++ / Grails / Groovy / Java / CocoaPods / Expecta / Cedar / Spock / Gradle

- Created turn key themed white label iOS application for iPhone/iPad for content producers such as Newspapers, Magazines or news Aggregators to allow them to have their own cost efficient mobile application for presenting their content to their readers. Application supports offline spending of credits/content (no internet), content synchronization, and commenting and sharing of articles; and a unique article rating system (think Digg thumbs up/down but more expressive to how people feel about content as apposed to just promote/demote). Further capabilities includes Classifieds, and Coupons and Deals (eg ScoutMob / Groupon) and chat notifications. See: http://ic2media.com

- Implemented Objective-C webserver to allow MVC request handling and publishing of website look&feel to the device as apposed to a traditional webserver for easy white-labeling / updates.

- Imported C Template API which mimics Perls HTML::Template API for template manipulation.

- Implemented backend CMS and Mobile service endpoint in Grails/MySQL using XMLRPC to handle device request, include payments, commenting, usage statistics and authentication. Application segmented into plugins to allow code reuse in sister projects. Test utilized Grails with Spock testing framework. iOS testing uses Cedar.

OPEN SOURCE

SR IOS DEVELOPER, VINYL RECORD **– 2013 - 2017** FREEWARE
iOS / Objective C/C++

* Contributed to original project before rebooting discontinued iActiveRecord, an iOS ORM persistence API, to fix bugs and implemented new features to make the interface and capabilities more similar to Rails/ActiveRecord and Grails/GORM. Enhancements include, fixing memory leaks, performance enhancements, Implementing SAVE POINTS and nested transactions, multithreading, entity caching, and the ability to save an entire graph instead of each individual model in a relationship.

   see @ **https://github.com/neilabdev/VinylRecord.git**

SR IOS DEVELOPER, I-DELAYED*JOB* **– 2014 - ON-GOING** FREEWARE
iOS / Objective C

* Created   API iDelayedJob which is Job scheduler allowing transparent performance and retrying of task until successful or exhausted, even across application restart, and was modeled and inspired by the equivalent rails plugin of similar name, "Delayed Job".

* Interfaces allows developers to subclass or conform to a protocol which enables job maintenance for tasks, such as submitting a comment or payment transaction to backend server, which will be retried until the designated method returns successful or max attempts are overcome. If jobs are designed as requiring internet, they will not be attempted when nointernet is available.

   see @ **https://github.com/neilabdev/iDelayedJob**