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Software Developer

Summary Project History

Project: Further development of mobile iOS App "Cornelsen Lernen"
Time: 10/2020 - 5/2023
Client: Cornelsen Verlag GmbH, Berlin, Germany
Details: Further development of mobile iOS App "Cornelsen Lernen" in crossfunctional team in an agile environment. Implementation of backend communication with coordination across teams. Integration of complex web components in iOS App with bidirectional data flow. Implementation of deployment environments and targets, integration in CI/CD.
Tools: Xcode, Objective-C, Swift, AppCode, RubyMine, JavaScript, Ruby, git, JIRA, Scrum

Project: UI Control and Module Development in JavaScript Application Framework
Time: 8/2017 - 5/2023
Client: (NDA)
Details: Implement UI controls (chart and richtext) in JavaScript Application Framework. Investigate variety of 3rd party libraries to provide the required features for chart and richtext control. Add Highcharts and CKEditor libraries for chart and richtext control. Adjust 3rd party libraries for compatibility for AMD (Asynchronous Module Definition) loading. Implement remote logging module with exponential back-off and size limited batch send. Investigate and fix bugs in 3rd party libraries. Work on business logic.
Tools: IntelliJ IDEA, WebStorm, Eclipse, JavaScript, AMD, CSS, HTML, Markdown, Node.js, Chrome, Firefox, Safari, IE, Edge, Chrome Developer Tools, Firefox Developer Tools, Safari Developer Tools, Safari Technology Preview, IE Developer Tools, MS SQL Server, hg, git, Scheme, CKEditor, Highcharts, syn, cygwin, make, shell, Android Studio, Android Emulator, iOS Simulator

Project: iOS iPad App client, Ruby on Rails backend and Node.js backend in Health industry
Time: 9/2014 - 8/2017
Client: (NDA)
Details: Software development for iOS iPad app, Ruby on Rails backend and Node.js backend. Rebrand iOS iPad app and Ruby on Rails backend. Create white label solution. Optimize multithreaded processing and video capture in iOS iPad app. Replace RESTful API with JSON-RPC API for Node.js based backend.
Tools: Xcode, Eclipse, IntelliJ IDEA, RubyMine, Vagrant, Puppet, VirtualBox, Objective-C, JavaScript, Ruby, Ruby on Rails, PromiseKit, Adobe Photoshop, hg, git, CentOS, AVFoundation library

Project: Create set of iOS apps for elementary school level learning
Time: 1/2014 - 5/2023
Client: (inhouse)
Details: Create a set of iOS apps (Üben brand) for practicing and learning specific

topics for elementary school level. Topics are music notes, addition, multiplication, conversion, rounding. The apps share a common core implementation for the learning workflow. Artwork is developed with Inkscape in SVG format for easy scaling to different image dimensions. Scripts are developed to export artwork in all required image dimensions. Fastlane is used to automate development, testing and release process. Statistical data is collected in XML files or native databases (Core Data).

Tools: Xcode, RubyMine, Objective-C, Ruby, Inkscape, SVG, hg, git, iOS, fastlane, Core Data, macos, iPad, iPhone, Shell

Project: Customize Apache PDFBox project

Time: 9/2008 - 8/2014

Client: (NDA)

Details: Customize Apache PDFBox project for use in mail merge scenarios and file merging tasks. Correct implementation of XML Forms Architecture (XFA) to work in line with Acrobat Forms. Implement incremental updates. Merge custom changes and public codebase for significant new releases. Develop Java Swing PDF file inspection app to simplify inspecting PDF-structure. Develop a validation tool for automated remote testing to assert production of correct PDF output files.

Tools: Java, Java 1.5, Java 1.6, Swing, Eclipse, JUnit, Ant, Adobe Acrobat, Adobe Designer, hg, svn, ArgoUML, XML, XSLT, VMWare Workstation

Project: Create working custom Apache POI HWPf/XWPF project

Time: 8/2006 - 4/2014

Details: Greatly extend Apache POI HWPf and XWPF project from a preliminary status to correctly read, modify and write Word and Word OpenXML documents. Analyze binary Word file format. Performance optimizations for XWPF to significantly reduce memory footprint and significantly increase processing speed by several orders of magnitude when operating on large Word documents. Implement Java Swing inspection tool to provide the means to analyzing binary Word file format. Develop a validation tool for automated remote testing to assert production of correct Word output files.

Tools: Java, Java 1.5, Java 1.6, Eclipse, JUnit, OpenXML4j, XmlBeans, Ant, MS Word, svn, hg, ArgoUML, XML, XSLT, ECMA-376, OfficeOpenXML, OOXML, ISO/IEC 29500, VMWare Workstation

Project: Develop cross-platform interactive vector graphics library

Time: 12/2010 - 4/2011

Client: (NDA)

Details: Develop a cross-platform interactive vector graphics library for use with the languages Java, JavaScript and Scheme and on platforms JavaSE, Web browsers and mobile phones.

- Perform inception, elaboration and construction phase for project
- Develop prototypes in each platform/language scenario
- Develop common API and platform specific implementations
- Develop tests

Tools: Java, Java 1.5, JavaScript, Scheme, Eclipse, Eclipse 3.x, JUnit, Ant, svn, ArgoUML

Project: Create Virtual Server Infrastructure for Mail, VCS, Backup and VPN

Time: 1/2018 - 6/2020

Client: (inhouse)

Details: Create a virtual server infrastructure to host various servers and establish seed, backup and restore procedures. The infrastructure is

designed to have minimal footprint in resources and dependencies and can operate while being disconnected from the internet. Create mail, storage, CVS, VPN and mirror servers.

Tools: IntelliJ IDEA, WebStorm, VirtualBox, VMWare Workstation, Vagrant, Puppet, Packer, JavaScript, Node.js, dovecot, fetchmail, postfix, Alpine Linux, Ruby, bash, ssh, PKI, openssl, cygwin, svn, hg

Project: Correct time handling and XA in jTDS JDBC Driver

Time: 2/2009 - 6/2013

Client: (NDA)

Details: Extended the jTDS JDBC Driver to correctly support XA (distributed transactions) for production use. Extend the jTDS JDBC Driver to ensure, Date/Time values are processed correctly across Timezones and Daylight Savings dates. Migrate pre-JDK6 code to JDK6.

Tools: Java, Java 1.4, Java 1.5, Eclipse, Eclipse 3.x, JUnit, Ant, svn, Visual C++ Express, MS Platform SDK, MS SQL Server Express

Project: Porting an ASP/MS-SQL project to PHP/MySQL

Time: 3/2006 - 6/2006

Client: Print Media Industry

Details: Porting an industry register / catalog from ASP/MS-SQL to PHP5 with MySQL 5.x database; features of the catalog include user registration with confirmed opt in, presentation of user's contact and expertise details, sending inquiries to registered users by site visitors.

Tools: PHP, PHP4, PHP5, MySQL, MySQL 5.x, Savant2 Library, ImageMagick, sed, perl, svn

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