Joel S. Williamson

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PROGRAMMING SKILLS

Extensive development experience in C#/.NET, C++, Java, Typescript
Other skills include Git, Visual Studio, Linux, Jenkins, Python, .NET, WPF, Android, Agile (Scrum and Kanban)

WORK EXPERIENCE

ESAB – Senior Software Developer September 2020 - December 2023

OCTOPUZ - 3D Windows application for simulating and programming welding robots

- Integrated multiple collision detection engines
  - Created abstraction layer allowing multiple engines to be called with a single interface
  - Designed benchmark suite to compare performance of different engines
- Created automated performance regression test framework
  - Reduced manual QA time by 2 days per release
- Added support for navigating 3D view using a 6-axis input controller
- Created parser for Yaskawa robot programs using parser combinators
- Added support for new types to ORM library used to serialize data to and from SQLite database
- Led performance analysis and optimization effort that reduced simulation time by 80%
- Created user stories, estimated story sizing and prioritized epic work
- Triaged, troubleshot, analyzed and fixed issues reported by customers (in combination with QA and support)
- C#/.NET, C++/CLI, WPF, Win32

TextNow – Software Developer January 2020 - March 2020

Calling API - iOS/Android app to make calls without cellular service

- Fixed concurrency and resource-use bugs in VoIP client
- Refined cross-platform builds for Android, iOS and web clients using Bazel
- C++, Swift, Kotlin, Bazel, SIP

Carnegie Technologies – Software Developer February 2017 - December 2019

SatBridge App - iOS/Android app to configure satellite antenna/WiFi hotspot

- Used Cordova and Ionic to develop unified cross-platform UI
- Developed platform-specific plugins to allow intelligent network switching
- Typescript, Java, Ionic

Link Aggregation Client - iOS/Android app to use WiFi and cell networks to improve connection speed and reliability

- Integrated existing SDK into TypeScript based user interface
- Extended SDK with new features and bug-fixes
- Maintained and extended Jenkins build pipelines
- Developed congestion control algorithm to optimize usage of multiple networks
- Worked with client company to maintain and update calling app
- C++, Java, Objective-C, TCP, UDP

Exinda Networks – C/C++ Software Developer August 2015 - October 2016

Centos-based WAN Optimization firmware

- Integrated major Deep Packet Inspection software upgrade from external vendor
  - Implemented comprehensive test suite to ensure functionality was preserved
  - Rewrote core interface to take advantage of event-based architecture
- Created system to allow L7 classification engine to be upgraded independently of base system
- Led development of automatic deployment to virtual hosts
- C, C++, Tcl