Michael Stumpf

SOFTWARE ENGINEER · EMBEDDED

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Experience

Philips Respironics *Pittsburgh, PA*
SOFTWARE ENGINEER *Aug. 2018 - Present*

- **Next Generation CPAP**
  - Prototyping GUI front-end using web technology on embedded Linux
  - Cross compile in docker container for ARM A7
  - Evaluating multiple UI frameworks LVGL, TouchGFX, and using Chromium with a webserver
- DreamStation 2 (coming soon)
  - Identified and remediated bugs on the device writing in C/C++ for a microprocessor running SMX RTOS
  - Developed WPF .NET core application to upgrade the device using STM DFU protocol
- SmartSleep Headband
  - Collaborated in building Embedded Firmware running FreeRTOS on STMF4
  - Maintained .NET framework desktop application for interacting with the device
- Simply Go Family
  - Prototyped various sensors for a new oxygen concentrator device on a STM32F4 development board
  - Implemented valve control algorithms to produce optimal oxygen levels
  - Worked closely with Mechanical and Electrical Engineers throughout the development life cycle
- **Artifactory Initiative**
  - Identified and communicated the need for artifact management after transition to Git
  - Developed the business case of incorporating Artifactory that supports pip, NuGet, and Conan Packages to CI/CD pipeline which addressed project planning, cost-benefit analysis, and requirements generation
- **Agile/Supervisor roles**
  - Coached various project and Initiative teams as scrum master
  - Supervised and lead a team of 3 Software engineering interns in end to end development of an application using Avalonia
  - Converted a team of 70+ people in multiple scrum teams following SAFe practices and was recognized by receiving "Agile Transformation Pioneer" award

IQ Inc *Pittsburgh, PA*
SOFTWARE ENGINEER *July 2017 - Aug. 2018*

- **Hitachi**
  - Developed automatic train control systems in C/C++
  - Integrated Unit Tests into legacy code system using Google Test and Google Mock frameworks
- **ALung**
  - Performed formal verification testing for products like hemolung

Skills

Programming	C/C++, C#, Python, Rust, Node.JS, LaTeX, Lua, Linux, FreeRTOS
Web	Django with Python, Express with Node.js, Actix with Rust, HTML5, CSS
Desktop	WiX Toolset, WPF, Winforms, Node.js
Build Tools	Conan, CMAKE, GCC, GDB, MSVC, NuGet, pip, Visual Studio, .NET, Docker, Ninja, IAR, VS Code
CI/CD	TeamCity Admin, GitLab, Artifactory Admin
Source Control	Git, SVN
Planning Tools	Jira, Portfolio, Confluence, Team Foundation Server now Azure DevOps

Education

University of Pittsburgh *Pittsburgh, PA*
MASTERS IN BUSINESS ADMINISTRATION *2020 - Present*

- Candidate for Master of Business Administration

Penn State Behrend *Erie, PA*
B.S. IN COMPUTER ENGINEERING *2013 - 2017*

- Bachelor of Science in Computer Engineering