Lee Mracek

10129 Lockwood Dr, Cupertino, CA 95014 | 669-666-2909 | lee.mracek@gatech.edu | https://github.com/m3rcuriel

Objective

- To build on experience in production environments through larger scale or to continue exploring embedded development.

Summary

- Software engineering background includes four years of real-time programming experience. Gained full-time work experience in software development at Diamond Systems Corporation, a single board computer design company. As Director of Software Engineering for Monta Vista Robotics, applied mathematics and engineering concepts from control theory and stochastic modeling in algorithms for robot control. In high school senior year took classes at De Anza College including differential equations and multivariable calculus.

Education

ONGOING | GEORGIA INSTITUTE OF TECHNOLOGY | ATLANTA, GA | CLASS OF 2020

- Double Major: Computer Science & Electrical Engineering
- Related coursework: Obj. Oriented Programming, Linear Algebra

DE ANZA COMMUNITY COLLEGE | CUPERTINO, CA | 2014 - 2016

- Related coursework: Intro/Adv. C++, Calculus, Multivariable Calculus, Differential Equations

SKILLS:

- Java, C++, Bazel, LabVIEW, Python (including for data analysis with numpy/scipy), Simulink, dSPACE, Control Desk

Experience

HEAD MENTOR | VALKYRIE ROBOTICS TEAM | APR 2016 - *PRESENT*

- Founded and am assisting a robotics team consisting of high schoolers in the community to enrich their STEM educations. Both founding head mentor as well as in charge of all technical work. Real-time programming for embedded systems and abstract Python libraries.

CONTROLS & MODELING | GEORGIA TECH ECOCAR 3 | AUG 2016 – *PRESENT*

- Write HIL simulation code for dSPACE using Simulink. Use AutomationDesk to write Python unit-test cases for controls.

SOFTWARE ENGINEER | DIAMOND SYSTEMS CORPERATION | JUL 2015 – SEP 2015

- Placed in charge of all software, and supporting existing PC boards to consumers. Worked with the CEO of Rocket EMS to evaluate hardware and software system and eliminated software as root cause after working with them for several weeks designing newest revision of a PC board. Gained experience in reverse-engineering the code of my predecessors in order to support consumers and developed hands-on with the boards.

DIRECTOR OF SOFTWARE ENGINEERING | MONTA VISTA FIRST ROBOTICS TEAM | APR 2013 – MAR 2016

- Implemented control theory, stochastic modeling and state-space representation which were used for machine learning and controls code on the robot. Developed overarching framework for writing code for math utilities, hardware abstractions and timing methods.

PROJECTS (LINKS TO SOURCE)

Glowstone (https://github.com/GlowstoneMC/Glowstone) | An open-source implementation of the Minecraft Server in Java

frc2016 (https://github.com/m3rcuriel/frc2016) | Java library for MVRT's robotics needs including timing and controls.

mass (https://github.com/valkyrierobotics/mass) | Valkyrie Robotics' library for robotics, including 100 µsecond precision timing, state-space control abstraction, and thread-safe logging.