

# Lee Mracek – Résumé

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## Summary

**Objective:** To expose myself to the challenges of engineering a production-ready product with large volume and scaling.

Will be attending Georgia Tech University in the fall, majoring in Computer Science and Mechanical Engineering. Software engineering background includes four years of real-time programming experience, including for my school's robotics team. Gained full-time work experience in software development at Diamond Systems Corporation, a single board computer design company. Also applied mathematic and engineering concepts from control theory and stochastic modeling in algorithms for robot control. In my high school senior year took classes at De Anza College including differential equations and linear algebra.

Skills: *Java, C++, C, Bazel, LabVIEW, Go, Python (including for data analysis)*

## Experience

**Apr 2016 -** [Valkyrie Robotics Team](#)

**Present** *Head Mentor | Lead Technical Mentor*

Founded and am working with a robotics team consisting of highschoolers in the community to enrich their STEM educations. Both founding head mentor as well as in charge of all technical work. Realtime programming for embedded systems and abstract Python libraries.

**Apr 2015 -** [Monta Vista FIRST Robotics Team](#)

**Mar 2016** *Computer Science and Electrical Mentor | Systems Administrator*

Implemented control theory, stochastic modeling and state-space representation. Developed overarching framework for writing code for math utilities, hardware abstractions and timing methods. Used statistical methods to reduce error during sensor measurement.

**Jul 2015 -** [Diamond Systems Corporation](#)

**Sep 2015** *Software Engineer*

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

**Apr 2013 -** [Monta Vista FIRST Robotics Team](#)

**2015** *Head Electrical and Software Engineering | Website Administrator | Systems Administrator*

Responsible for all software and electrical components of our robot, including writing control algorithms using PID and vision tracking. Migrated team to Java and version control for productivity improvement.

**Ongoing** [Projects](#)

[lighthouse](#) - a simple open-source launcher for ArchLinux using Xlib and XCB in C

[Glowstone](#) - an open-source implementation of the Minecraft Server in Java

[frc2016](#) - a Java library for MVRT's robotics needs; designed and implemented mainly by me, although incomplete.