

# Erich Viebrock

Milpitas, CA

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## OBJECTIVE:

Pursuing a position as a Software Developer where I can apply my knowledge of object-oriented programming to efficiently provide high-caliber software solutions

## PROFESSIONAL EXPERIENCE:

### Software Test Engineer

January 2014 – Present

Curexo Technology Corporation, Fremont, CA

- Responsible for designing and executing risk-based software integration level tests covering Diagnostics and Calibration functionality of a robotic surgical assistant
- Developed automated white-box tests in C++ on a QNX platform. Designed and executed additional manual tests for system validation. Work was completed on time, under tight scheduling conditions
- Trained company personnel on proper use for new software features of a robotic surgical assistant, including developers, electrical engineers, and clinical trainers
- Assisted with preparing international standard IEC 62304 compliant test documentation for FDA 510(k) submission

### Software Test Engineer Intern

May 2013 – August 2013

Curexo Technology Corporation, Fremont, CA

- Documented requirements and performed manual black box testing trials to enhance product quality of a robotic surgical assistant
- Implemented and managed an email notification system for an automated testing system integrated with commercial static analysis tools, and made front-end changes for usability
- Established specifications and validation procedures for off-the-shelf software to ensure FDA and ISO compliancy

### Electrical Engineer Intern

January 2012 – August 2012

JST Corporation, Harrisburg, PA

- Wired and tested electrical control panel I/O by varying PLC outputs with RSLogix 5000
- Backed up and recovered information on industrial HMIs used for high speed connector assembly machines
- Updated electrical schematics with design changes of different types of servo motors ranging from linear, direct drive, and rotary motors with gear boxes via AutoCAD Electrical

## **EDUCATION:**

**Bachelor of Science, Computer Engineering**  
**Minor, Computer Science**  
University of the Pacific, Stockton, CA

### **Projects**

- Senior Project II: Designed an autonomous robot with a team of four engineers in Arduino C. Robot was capable of sensing its environment, and traveling to any user inputted waypoints within a 24,000 ft<sup>2</sup> building. Motion was implemented with the self-balanced Segway paradigm, and was capable of avoiding any obstacles the robot may encounter during travel
- Computer Networking: Wrote a multi-threaded program to implement a TCP chat room server and GUI client using Tkinter in Python. Clients were all routed through a central server, which required parallel tasks to communicate with each other. Race conditions were handled with dedicated queues and blocks
- Data Structures: Created the event driven arcade game "Breakout" in C++ in conjunction with OpenGL and GLUT. Displayed output in real-time interactive 2D GUI. Stored all dynamic game objects in respective linked lists. Iterated through all lists at redraw rate of 30 FPS for collision detection
- Computer Organization and Architecture: Designed a 32-bit MIPS embedded processor from Boolean logic gates and multiplexers. Processor supported the standard MIPS instruction set including exception handling, supervisor control, and interrupts

## **KNOWLEDGE AND SKILLS:**

### **Programming Languages**

C++, C, Python, HTML, CSS, Assembly, VHDL, JSIM

### **Software and Tools**

Windows, Linux/UNIX, Git, Subversion, Visual Studio, CMake, Jenkins, Microsoft Office

### **Communication and Organization**

- Excellent technical writing and presentation skills
- Strong teamwork skills acquired from fast paced Curexo internship
- Exceptional organizational skills developed during JST internship