

Benjamin Micah Engebrecht

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Objective

To obtain a career in the field of software design, allowing application of theoretical and practical classroom learnings.

Education

Iowa State University, Ames, IA

Bachelor of Science in Computer Engineering

Expected May 2017

Work Experience

Rock Island Parks and Recreation, Rock Island, IL

May to August 2014-2016

Team Leader

- Advanced to team leader position while a seasonal employee
- Managed peers to keep deadlines while maintaining quality standards
- Provided highly adaptable skills to many different projects

IDC Technology Solutions, Geneseo, IL

May to August 2013

Computer Technician/Sales Associate

- Provided superb customer service as both a technician and sales associate
- Managed cash register responsibly and performed basic accounting functions
- Solved complex problems that impacted customers through custom software

Project Experience

Mobile Phone Development

- Worked as part of a four-person team to design and develop a Java backend for a Node.js app
- Learned about different forms of agile development frameworks and implemented SCRUMM
- Developed a database querying method in Java through the RESTful API
- Provide database administration services to current application

Portable Nutrient Data Analysis

- Designed portable nitrate analysis system with off-the-shelf parts to lower cost
- Interfaced multiple pieces of hardware through different software languages and protocols
- Used communication skills to bridge gap between development team and project commissioner
- Implemented Bluetooth connection establishment and data transfer in Python

Embedded Systems Development

- Developed code in C for an ATmega128 processor driving an iRobot Create platform
- Designed interfaces with specialized sensor systems from product documentation
- Tested a semi-autonomous robot for programming errors through software testing

Other C/C++ Projects

- Remade a console based RPG with random level generation, save states and pathfinding enemies in C, later transferred to C++ and refactored to make use of object oriented design
- Programmed a replacement DLL for Windows that hooks into the XInput library and maps multiple input controllers into one output controller
- Developed threaded TCP/IP framework and FAT12 kernel module for Unix-based operating systems

Hardware Design

- Built circuit and circuit board for ATmega328 based audio synthesizer
- Designed and tested 90% efficient class D amplifier IC
- Used VHDL to design working MIPS processor that ran assembly code

Leadership Experiences

President of Brown House - Helser Residence Hall

2013-2014

Team Leader – Rock Island Parks and Recreation

2014-2016

Technical Skills

Programming Languages

- **Proficient:** Java, C/C++, JUnit, MIPS Assembly, VHDL, Verilog, SQL, TCP/IP in Linux
- **Familiar:** JavaScript, HTML, CSS, JQuery, RCP, Python, Bash, Sed/Awk Scripts, C#, Rust

Design Philosophies

- **Proficient:** Object Oriented Programming (OOP), Unit Testing, Project Management, Agile Development
- **Familiar:** Design Patterns, Build Automation, Software Maintenance, UML Modeling