# Daniel Volz

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## Education

***Rice University***

- *Master's Electrical Engineering*, Specializing in *Computer Engineering* (Graduated May 2015)
  - Enrolled in the George R. Brown School of Engineering **(GPA: 3.98)**
- *B.S. Electrical Engineering*, Specialized in *Computer Engineering* (Graduated May 2014)
- *Graduate Coursework:*
  - Advanced Object-Oriented Design
  - Algorithm Analysis and Design
  - Computational Photography
  - Advanced VLSI Design
  - High Performance Computer Architecture
  - Networks
- *Undergraduate Coursework:*
  - Operating Systems
  - iOS Applications Design
  - Computational Thinking in Python
  - Mobile Embedded System Design
  - Web App Development
  - Random Signal Processing

***Jacobs University*** – Bremen, Germany (Spring 2012)

## Employment

***Oracle*** ***Member of Technical Staff*** ***August 2015 – Present***

*Virtual Operating System Team*

- The virtual operating system team builds modules that provide process/thread management and scheduling, memory management, synchronization support, CPU and I/O resource management, intercluster and interprocess communication, high-performance file I/O, and more.

***Micron Technology*** ***Software Engineer, Intern*** ***May 2013 – May 2015***

*Automata Processor* (May 2014 – May 2015)

- Small research team funded by Micron developing a groundbreaking non-von Neumann architecture.
- Lead development of Automata USB Development Board.
  - Firmware development in C.
  - Created a GUI debug application in Java.
  - Automata chip test scripting environment in Python.
  - FPGA development in Verilog.

*MicroMate Platform* (Summer 2013)

- GUI and automation tool design and development in C# and C++.
- Compiler development for Micron's algorithmic pattern generation language.

## Projects

***NASA Student Launch Initiative – Electrical Team Lead***

- Successfully designed a sensor that measured change in magnetic field to calculate acceleration.
- Verified accuracy and functionality aboard a NASA zero-gravity flight.

***Fast SIFT-Based 3D Medical Image Registration***

- Accelerated MRI registration speeds 10x the speed of existing solutions using GPU hardware.
- Developed iOS application for rapid viewing of patient scan results.
- Implemented system at UT Health Science Center.
- **Awards:** Ken Kennedy Institute Research Award and Bill Wilson ECE Senior Design Award

***Other Projects:***

- **Paintr:** iOS App with computer vision based Van Gogh filter. Available for free on the App Store.
- **Operating System:** Unix-based OS with file system, scheduling, and concurrent process synchronization.
- Real-Time Embedded System Quadrotor Copter
- Probabilistic Digit Recognition Algorithms
- Facial Detection and Expression Analysis

***Languages and Technologies:*** C, C++, C#, Java, Python, Objective-C, Swift, Matlab, Verilog

## Philanthropy

**Haiti Health Initiative** (January 2015)
**Aurora Youth for Success** (July 2012)
**Habitat for Humanity** (April 2008)
**Casas Por Cristo** (November 2006, July 2007)
**NASA K-12 Outreach** (Spring 2013)
**Praying Pelican Missions** (June 2011)
**Christ the Servant Missions** (July 2008 and 2009)
**Boulder Homeless Shelter** (2003 – 2009)