Nathan Dunn

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Education

University Of Massachusetts Amherst — **Graduating May 2017**
B.S., Computer Systems Engineering — GPA: 3.95

Professional Experience

Arm

Graduate Software Engineer — **June 2017 - Present**

As a member of the Cycle Models team, I help deliver software that functionally models Arm IP while maintaining cycle accuracy. Projects have included:

- Developing SystemC debugging and test utilities that operate Arm bus protocols at a TLM level

Brightergy LLC, Kansas City, MO

Software Development Intern — **Oct 2016 – Jan 2017**

Working remotely, I helped to sustain the DevOps culture by assisting with QA testing and developing new ways to monitor key production statistics. Some of my responsibilities included:

- Developing unit tests for back-end APIs
- Contributing to an open-source Elixir project to display automated script/testing results on company dashboards

Fidelity Investments, Merrimack, NH

Software Development Intern — **May 2016 – Aug 2016**

I served as the front-end developer on the complete rewrite of an internal web application used to display relevant company financial data to managers/executives. Utilizing Angular 1.5 and Typescript, I created a modular, component based architecture. I communicated regularly with offsite backend developer and graphic designer, to coordinate and deliver on product features. The application is scheduled to go live in the first quarter of 2017.

University of Connecticut, Storrs, CT

Undergraduate Researcher — **May 2015 – Apr 2016**

Through a Research Experience for Undergraduates program funded by the National Science Foundation, I worked in a group investigating methods to identify counterfeit integrated circuits. Some of my projects included:

- Developing a PHP MVC web application for industry and academic professionals to share counterfeit inspection results
- Writing a MATLAB image processing program to identify scratches on integrated circuit casings
- Assisting in the writing and editing of an academic conference paper

Projects

Earbeamer

Senior Design Project — **September 2016 - April 2017**

In a team of four, built a wall-mounted hearing aid system that used image and audio processing to dynamically track, isolate and amplify the audio streams of all individuals within a room.

- Implemented target tracking in C++ using an Xbox Kinect
- Designed microphone array geometry and conducted simulations to maximize directivity

Selected Publications

N. Asadizanjani, S. Gattigowda, N. Dunn, D. Forte, and M. Tehranipoor, "A Database for Counterfeit Electronics and Automatic Defect Detection Based on Image processing and Machine Learning," *Int. Symposium on Testing and Failure Analysis (ISTFA)*, 2016.

Programming Experience

Languages: C++, Java, Typescript/Javascript, Elixir, MATLAB, Verilog, Bash
Web Technologies: AngularJS, Phoenix Framework, HTML, CSS, Bootstrap
Other Skills: Bash Scripting, MySQL, PostgreSQL, Linux/Unix,