Mark Keele

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Objective

To secure an internship position for the Summer of 2015 with a concentration in Web Development, Networking, and Security where I can continue to work towards my goal of being proficient in the full stack of Web Development.

Profile

- Web applications developer with 4 years of experience

- Experience with multiple Model View Controller frameworks

- Comfortable actualizing projects from conception to deployment

- Ability to communicate with clients and understand requirements

Technical Skills

- Real-time application development using all Javascript stack including NodeJS RESTful APIs and Sockets, MongoDB storage, and AngularJS front-end interface

- MVC web application development with Ruby on Rails, JavaScript, CSS, and MySQL including production level deployment with Linux and Apache

- Unix based systems experience including shell scripting, process management, server deployment, and application hosting

- Pragmatic developer accustomed to collaborative workflow, agile project management, and version control software such as Git

- Hardware level experience with embedded systems and C

Education

- **Master of Science in Computer Science – Graduation 05/2016**   GPA: 4.0
  School of Informatics and Computing, Indiana University – Bloomington, Indiana

- **Bachelor of Science in Computer Science – Completed 12/2012**   GPA: 3.0
  College of Basic and Applied Sciences, Middle Tennessee State University – Murfreesboro, Tennessee

Work Experience

- **Research Assistant, Center for Research in Extreme Scale Technologies**   08/2013 – Present
  Indiana University – Bloomington, Indiana

  - Developed and deployed both a client side and server side web application that is used as a part of the GENI Network test bed.
  - The client side application provides real-time updates, using Web Sockets, on the elements of a user's network topology. Users could submit measurement tests and view the results.

- The server side application exposed a secure RESTful HTTP and Socket API that users could query directly for their data.

- Project exists as a layer in an existing network instrumentation and measurement system. Communicates with a central application that represents network topologies. Experiment data could be stored and measurement objects could be created.

- Gave conference talk on the functionality and capabilities of the software. Made available for attendees to experiment with.

- **Intern - Ruby on Rails Developer, Leadership Computing**   06/2012 – 07/2013
  Oak Ridge National Laboratory – Oak Ridge, Tennessee

  - Designed, developed, tested, and deployed a web application using the Ruby on Rails framework. Application used internally to track resources and allocations of users and projects for the Supercomputers.

  - Closely collaborated with mentor, database designer, system administrator, and end users. Striking a balance between technical requirements and end user workflow was critical.

  - Engaged in Test Driven Development methodologies in a pair-programming environment with an emphasis on continuous refactoring. Regression testing using both scenario tests with Cucumber and unit tests with RSpec.

Projects

- **XINU OS on Raspberry Pi**

  - Wrote basic operating system commands and added synchronization support using semaphores.
  - Included notion of futures and promises so that processes could synchronize on a given computation.

- **Lux Ex Machina**

  - An embedded system acting as a light meter that recommends shutter speed, aperture, and ISO to the user. Accomplished using ARM board, light sensor, and Wi-Fi adapter.
  - Front-end web application used to receive data, make calculations, and respond to device dimensions. Experience was tailored for iPhone and Android smartphones.

- **Summer of Networking**

  - Study based around practical aspects of networking from the OSI model. Focused on data link layer, network layer, and transport layer.
  - Concentrated on finding vulnerabilities in the web browser certificate system. Generation of wildcat certificates was used to capture login credentials during a Man in the Middle Attack.

- **SCinet Student Volunteer**

  - World's fastest network created due to collaborated with several other volunteers. Laid and tested fiber connections between booths and network operations centers.
  - Developed on Danjo based Intranet used to manage the services of SCinet. Answered tickets and fixed issues as they arose.