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Kiefer Hicks

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F. W. Olin College of Engineering

Bachelor of Science in Mechanical Engineering **2008–2012**

Eigenfaces c. 2011

I developed a user interface to allow myself to quickly identify feature placement in about 500 pictures of faces in non-laboratory conditions. I then wrote software to align the features and compute an average face, as well as the eigenvectors of the 500x0.5M matrix.

Lexmark SCOPE c. 2011–2012

I Worked with 3 other students to design, build, and operate an in-situ fixture to test the material properties of toner cleaning blades. I designed and constructed the electrical subsystem that supplied kilovolts to our test fixture. When we wrote the final report, I created the vast majority of the graphs that we used, and also served as the system administrator of our document build server.

Intuit

Application Operations Engineer **June 2012—September 2014**

Intern **Summer 2011**

Jenkins Migration

We had two Jenkins servers that each operated on the same set of products, but one performed builds while the other performed deploys. These servers differed in age, geographic location, installed plugins, and security model, and were implemented by different groups who often didn't see eye to eye. I created a new Jenkins infrastructure and moved all the jobs from each of the original two to it while mogrifying them as necessary to improve the scalability, reliability, consistency, and security of our architecture.

On Call

I was in a weekly on call rotation with 4 other engineers. The primary responsibility of the on call engineer is to pick up the phone when the 24x7 network operations center called. Secondary responsibilities included delegating or completing tasks from the intake ticket queue and investigating root causes of resolved incidents.

NuoDB

Quality Assurance Engineer **September 2014—**

Whirlpool Check

I wrote a complete implamentation of the Whirlpool hash function in SQL in order to rigorously prove that the semantic guarantees claimed by the product were, in fact, being delivered. I also wrote scripts around this test to run multiple copies of it quickly and efficiently, eventually providing orders of magnitude increases in performance over the original naïve implementation.

pynuosql

I wrote a complete and functional SQL shell in python that accepted SQL queries from the user, executed them on the server, and displayed the results of the command back to the user. It contained many industry standard features including, dynamic tab completion, paging, interactive long command editing, and extensive ouput customization.

Python **MediaWiki** **Statistics**

Bash LaTeX **Jenkins** **C**