

Jacob Kim

Fishkill, NY

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Summary

Experienced hardware engineer with a demonstrated history of scripting and programming at IBM. Looking to transition career into software engineering. Realized passion for programming through various personal projects and programming assignments at work. Self-motivated and constant desire to learn new technologies and tools to develop my skillset and take on more challenging tasks.

Experience

IBM	<i>Poughkeepsie, NY</i>
PHYSICAL DESIGN ENGINEER / PROGRAMMER	<i>Jul 2018 - Present</i>
<ul style="list-style-type: none">Optimized circuit design using Cadence and IBM tools to improve timing of chip from 5 GHz to 5.4 GHzSaved more than 10% for run time on simulations of chip design by analyzing previous chip data using Python and providing better inputsProvided insight on the current state of chip to management by creating visuals generated by parsing chip data and using matplotlib.Mentored an intern on a project for data visualization and organizing simulated chip data using mongoDB	
IBM	<i>Poughkeepsie, NY</i>
FPGA LOGIC DESIGN ENGINEER INTERN	<i>May 2017 - Aug 2017</i>
<ul style="list-style-type: none">Saved \$1 million by developing a FPGA test fixture for the next generation memory bufferCreated the slave interface between I2C and AXI to allow I2C commands to go onto the AXI interconnectImplemented both VHDL and C++ to design a sequencer for openCAPI that micro manages instructions through the AXI interconnect	
Rensselaer Polytechnic Institute	<i>Troy, NY</i>
SUMMER UNDERGRADUATE RESEARCH PROJECT ASSISTANT	<i>Jun 2016 - Aug 2016</i>
<ul style="list-style-type: none">Designed the algorithm for a self-alignment system for visual light communication using ArduinoOptimized the precision of the previous algorithm by 200% by utilizing trigonometry and time between light sensors turning on and offImplemented a solution that counteracted vibrations in the environment by continuous alignment	

Projects

Tennis Schedule Notifier	<i>July 2019 - Present</i>
<ul style="list-style-type: none">Created a service which notifies users via text once the schedule of play for their favorite tennis player is outDeveloped REST API end point by periodically scanning official ATP World Tour siteUtilized different AWS services such as Lambda, DynamoDB, API Gateway, and SNS	
Footwork (Android App)	<i>Apr 2019 - May 2019</i>
<ul style="list-style-type: none">Created an application to allow tennis athletes to practice their footwork on the courtSimulated a random tennis rally to mimic the footwork for matchplayDownload is available at https://tinyurl.com/TennisFootwork	
Watson Food Assistant	<i>Nov 2018 - Feb 2019</i>
<ul style="list-style-type: none">Created an Android app that works with IBM Watson Chatbot to recommend new recipes to usersGenerated recipes based on preferences by utilizing the Recipe Puppy API and storing the data using SQLitePlaced first in the IBM Developer JumpStart program by leading a team of seven software and hardware engineers	
Stock Prices and Sentiment Analysis	<i>May 2018 - May 2018</i>
<ul style="list-style-type: none">Developed a script to perform sentiment analysis on Bloomberg articles and see their correlation to stock pricesUtilized the NLTK and newspaper libraries in Python	
Software Engineering Team Project	<i>Jan 2017 - May 2017</i>
<ul style="list-style-type: none">Collaborated with four other developers to design and create an internal forum based on email domainUtilized tools such as PostgreSQL, Heroku, Spark, Google OAuth, Jasmine Testing, and Bitbucket	

Education

Lehigh University • GPA: 3.74 / 4.00	<i>Bethlehem, PA</i>
B.S. IN ELECTRICAL ENGINEERING • MINORS IN APPLIED MATHEMATICS AND COMPUTER SCIENCE	<i>Aug. 2014 - May. 2018</i>

Skills

Programming Languages	Java • Python • C / C++
Other	Git • DynamoDB • MongoDB • PostgreSQL • SQLite • Bootstrap • Handlebars • Linux (RHEL)