Kush Patel

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Education

University of Illinois at Urbana Champaign — Urbana, IL
Bachelor of Science in Computer Engineering — *Expected Dec 2019*

Relevant Coursework: OS Development, Algorithms and Models of Computation, Artificial Intelligence, Data Structures in C++, Distributed Systems, Database Systems, Communication Networks, Discrete Structures, Probability Principles

Skills

- **Languages**: Ruby, Python, C, C++, JavaScript, HTML, CSS, SQL, Shell Scripting
- **Frameworks**: Rails, Django, React.js, Redux.js, GraphQL
- **Databases**: PostgreSQL, SQLite, MySQL, MongoDB, NoSQL
- **Tools**: RSpec, Git, SVN, AWS, Hadoop, Jira, Linux

Experience

LendingHome — San Francisco, CA
Software Engineering Intern — *May 2019 - Aug 2019*

- Automated the loan origination process platform using Ruby on Rails in an agile environment
- Developed document based data-capture methods to simplify and expedite the loan process for consumers
- Created elegant, responsive front-end components to implement new loan automation features in React and Redux
- Interfaced with PostgreSQL database and GraphQL to access and modify real-time production loan data
- Practiced test driven development principles by utilizing RSpec as a test framework tool

State Farm — Urbana, IL
Data Engineering Intern — *Jan 2019 - May 2019*

- Designed backend optimizations in Python to decrease performance strain on the Big Data Hadoop Network
- Built a smart reporting module to report errors from the Hadoop Network to various teams based on prior error data
- Utilized SQL to analyze customer behavior data to improve State Farm services by displaying to a Django dashboard
- Saved and estimated collective 160 analyst hours through automation and optimizations

Zebra Technologies — Lincolnshire, IL
Firmware Engineering Intern — *May 2018 - Aug 2018*

- Integrated photosensors to create a more accurate alert system for detecting media status on Zebra Printers
- Developed an algorithm to determine media status threshold for the printer's modified alert system
- Built an analytical framework within the printer firmware to measure and collect printer metadata using C++
- Created a database schema using SQLite on the printer's flash memory to locally collect printer metadata

Zebra Technologies — Lincolnshire, IL
Advanced Development Intern — *May 2017 - Aug 2017*

- Improved print quality testing results by automating image analytics through Python and Shell scripting
- Collected environmental printer data using external sensors integrated in Python and stored in a PostgreSQL database
- Designed a data analytics dashboard using Django, HTML, and CSS to display data stored in an AWS Database

Projects

ByteOS: Developed a Linux-based kernel from scratch in C and x86 Assembly which implemented paging, system calls, scheduling, file systems, device drivers, and multiple terminals

Media Search Engine: Created a Python and Django based web application to display information about a TV show or movie on an interactive UI and generate recommendations based on genre tag analysis

Guitar Zero: Designed and created a SystemVerilog and C based Guitar Hero-like game on an FPGA which featured moving graphics, controller support, randomization, and sound drivers

Custom Wristband Printer: Worked with the team at Project Syncere to develop a Python script that allowed kids of all ages to print their own custom wristband on a Zebra printer by scanning a barcode with a wireless scanner