

# Rahul Shah

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## Education

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**University of Illinois at Urbana-Champaign**, BS Computer Science (ENG), Junior

*Class of Winter 2019*

Concentration in Big Data (AI/ML)

*GPA: 3.37*

**KTH Royal Institute of Technology**, Stockholm, Sweden

*Study Abroad Spring 2019*

## Experience

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**Justworks**, Full-Stack Engineering Intern

*New York, NY, May - August 2019*

Compiled a report which would find data determining if a company was in compliance with the Affordable Care Act.

Remodeled the existing report generator to be automated, allowing my report to be encrypted and submitted automatically.

Finished the project ahead of schedule, allowing me to tackle miscellaneous bugs on the Justworks website (React & Rails).

**Salesforce**, Infrastructure Engineering Intern

*San Francisco, CA, May - August 2018*

Designed and implemented a data pipeline querying hardware and software configurations from Salesforce's datacenters.

Built an interactive data visualization to display the information to upper management and other engineers.

Shifted a server testing platform validating patches by spinning up hosts and storing database snapshots in AWS S3.

**Chamberlain Group**, Firmware Engineering Intern

*Oak Brook, IL, May - August 2017*

Succeeded in expediting my project by three months in order to receive a \$1.0M up-front payment.

Constructed an API utilizing callbacks that allowed communication between a garage door and connected home device.

Developed a platform-independent UART driver that could be configured to be single or multi-threaded.

**Katalyst Technologies**, Software Engineering Intern

*Evanston, IL, July - August 2016*

Assisted in developing a real estate app by creating a conceptual framework of the logistics and developing the UI.

## Projects

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**DeepSleepNet**

*Spring 2019*

Recreated a Keras neural net (described in a study) that classified sleep stage based on an EEG & EOG readings.

Improved upon the study by changing the layers/architecture, standardization, and using batch normalization.

**CS 440 (Artificial Intelligence) & CS 447 (Natural Language Processing)**

*Fall 2018*

Built a Pong CPU which was able to play either against a wall (~40 bounces) or against a human player.

Implemented the IBM model to align words between languages, the Viterbi algorithm for a part-of-speech tagger, and the CKY algorithm to parse sentences into binary rules. Accuracy of all models was >90% on test data.

Check out the source code at <https://tinyurl.com/y75fulf4> or by visiting my website.

**Trader Joes'**

*Spring 2018*

Constructed a mock trading platform for users to learn how to trade stocks without risk.

Users were able to make real-time trades and compete against others on the top-gainers leaderboard.

**PURE Undergraduate Research**

*Fall 2017*

Created a representation of Twitter in ReactJS which allowed users to sort tweets based on sentiment and other filters.

Measured participants' responses to these filters and how people made sense of and reacted to what was displayed.

**Accessible Sidewalks**

*Fall 2018*

Developed an Android app that showed disabled users where obstacles and inaccessible curbs were located on campus.

Used data from the accelerometer to switch to night mode and used polylines highlight obstructed sidewalks.

**OTCR Consulting**

*Consultant | August 2017 – Present*

Devised a market-entry strategy for a mid-sized cachaça vendor by analyzing the potential Asian-Pacific countries.

Revamped a website for a large microelectronics company to display videos and information in an organized fashion.

**CS 296: Data Visualization**

*Spring 2017*

Created an interactive bar graph accurately displaying the gender growth and decline in all majors at UIUC.

**CS 498: Virtual Reality**

*Fall 2018*

Built Archer VR, a Tron-themed game that allowed users to shoot incoming enemies with a bow and arrow.

**DevMatch**

*Summer 2017*

Using the Ruby on Rails framework, created a website that would allow developers to meet entrepreneurs.

Check out the website at <https://ancient-plains-97934.herokuapp.com> or by visiting my website.

## Skills

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**Current Classes:** CS 421: Programming Languages & Compilers ENG 440: International Water Project

**Selected Past Classes:** CS 241: Systems Programming CS 374: Algorithms CS 225 Data Structures CS 411: Databases CS 447:

Natural Language Processing CS 440: Artificial Intelligence Artificial Neural Networks (KTH)

**Technologies:** C/C++ Rails Java React Python MySQL AWS/GCP Android Node Docker Linux Unity HTML/CSS

## Interests

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Music

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| Cooking

| Business