

# Richard Scherrer

· SOFTWARE DEVELOPER ·

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## Summary

I am a computer science student, graduating in May 2020, at the University of Illinois, Urbana-Champaign, with varied experience in fields ranging from computational legal work and natural language processing, to big data analysis and applied astronomical research.

Relevant skills and languages include Python (pandas, scikit-learn, numpy, Flask), Java, C++, Android Studio, JavaScript (React, Redux, D3.js), C, SQL, statistical machine learning, full-stack web development, data visualization (Tableau, Matplotlib), discrete math, and astrophysics.

## Experience

### Deutsche Bank AG

Cary, NC

SUMMER ANALYST

Jun. 2019 - Aug. 2019

- Utilized Tableau, Excel, and SQL for origination and advisory research and exploratory data analysis in a corporate setting.
- Created a natural language processing pipeline using Python, pandas, Indico, and scikit-learn, for the purpose of correlating stock sentiment with corresponding stock price.
- Produced a website for the aforementioned machine learning project using Flask, JavaScript, React, Redux, Node.js, Heroku, CSS and HTML, complete with visualizations demonstrating correlation and a BUY/SELL rating.

### Fulcrum GT

Chicago, IL

FRONTEND DEVELOPER

May 2018 - Aug. 2018

- On a team of developers, designers, and businesspeople, created a property tax appeal application for use in Cook County Property Tax Appeal Assessments.
- Using an framework focused on ease of use and automation, utilized Kubernetes, React, Flask, Sass, and PostgreSQL to create a fully functioning prototype ready for the market by the end of the summer.

### Hashed Health, LLC

Nashville, TN

BACKEND DEVELOPER

Jul. 2017 - Aug. 2017

- Used Solidity, Tendermint, Truffle, and golang for blockchain solutions to problems inherent to healthcare infrastructure.
- Implemented an application for analysis of Fitbit data to be sent to one's general practitioner.
- Additionally, implemented an application for the transfer of a doctor's legal documents safely and securely over blockchain for medical practice in other states.

### Vanderbilt Institute for Integrative Biosystems Research and Education

Nashville, TN

RESEARCH INTERN

May 2016 - Aug. 2016

- Used Arduino and C to create monitors of temperature, pressure and humidity for use in lab environments.
- In addition, contributed to pharmacokinetic/pharmacodynamic project in Python.

### United States Naval Observatory

Nashville, TN

RESEARCH INTERN

May 2015 - Aug. 2015

- Assisted in big data: used Python 3 architecture, along with SQLAlchemy and Peewee, to catalog celestial objects for use in The Nautical Almanac.
- Additionally, pioneered new way of mapping stars to the globe topologically, also using Python.

## Education

### University of Illinois, Urbana-Champaign

Urbana-Champaign, IL

B.S. IN COMPUTER SCIENCE AND ASTRONOMY

Aug. 2016 - May 2020

- Relevant Coursework:** CS446 (Machine Learning), CS426 (Compiler Construction), CS421 (Programming Languages and Compilers), CS374 (Introduction to Algorithms and Models of Computation), CS241 (System Programming), CS233 (Computer Architecture), CS225 (Data Structures), CS199 (Undergraduate Open Seminar in Computer Science), CS196 (Freshman Honors), CS173 (Discrete Structures), CS126 (Software Design Studio), CS125 (Introduction to Computer Science)

## Research Papers & Academic Positions

### BIG BANG NUCLEOSYNTHESIS WITH STABLE $^8\text{Be}$ AND THE PRIMORDIAL LITHIUM PROBLEM

2017 **Physical Review D**, 96, 083507, R.T. Scherrer and R.J. Scherrer

### TEACHING ASSISTANT FOR CS 196

2019 **CS 196: Freshman Honors**, I was the project manager for a small group of freshmen, who created their own application (a stock market analysis tool) before the end of the semester.

Jan. to May