

# KAITLIN A CLARK

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## EDUCATION

**Bachelor of Science, 2020** / Washington University in St. Louis (WUSTL)

Major: Computer Science

Minor: Bioinformatics

*Honors:*

- 2017 Ralph Bunche Scholar Award Recipient for academic excellence
- 2018-2020 MARC U-STAR Scholar with 2 years of NIH-funded research

## TECHNICAL KNOWLEDGE

**Languages:** Java, C++, ReactJS, React Native, Swift, SocketIO/Express, NodeJS, JavaScript, Angular, PHP, HTML/CSS, Python, Git, Bash, Arduino C, Mathematica (Wolfram Language)

**Technologies:** Kali Linux, Ubuntu 16.04, WireShark, VirtualBox, AWS EC2, MySQL, MongoDB, Nginx, GitHub, Bit Bucket, Apache, Linux/Unix, Docker Hub, Xcode IDE, Visual Studio

## RELEVANT EXPERIENCE

Department of Computer Science | WUSTL

**Teaching Assistant**

*January 2017 – May 2020*

- Presented and explained material on data structures and object-oriented concepts, such as arrays, queues, classes and inheritance.
- Assisted students in debugging various applications in Java, Python, PHP, HTML/CSS, SocketIO, JavaScript, Mathematica.

Department of Computer Science | Princeton University

**Research Assistant**

*Summer 2019*

- Engineered an automated algorithm to infer of copy-number variants in the human genome based on simulated sequence reads using Python.
- Analyzed the accuracy and precision of simulated sequencing data using Hidden Markov Models and Viterbi algorithm, which utilizes maximum likelihood estimation to infer copy-number of a chromosomal region.

Summer Engineering Fellowship Program | WUSTL

**Research Assistant**

*Summer 2018*

- Engineered a Python script to analyze biological data on human genes and cancer.
- Developed Bash scripts to automate the integration of a preexisting algorithm with my novel data analysis pipeline using Docker Hub container.

## PROJECTS

**Chat Room** - SocketIO, JavaScript



Simple chatroom with group and direct messaging functionality. Users can create chat rooms with arbitrary chat names. Chat owners can temporarily kick or permanently ban users.

**Virtual Calendar** - MySQL, PHP, JavaScript



A virtual calendar capable of storing events with login/sign up functionality. Registered users can add, delete, edit, and share events. Calendar sharing is also supported between registered users.

**Location-based Chat** - Angular, SocketIO, Google Maps API



Chatrooms created based off the user's current location (if allowed). User can also join other chats available on a map. Application also supports private chats and video broadcasting.