

# Rohit Batra

SOFTWARE ENGINEER

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## Coursework

- CS 2102 - Discrete Mathematics
- CS 2501 - Software Development Essentials
- CS 2501 - Computer Organization & Architecture
- CS 2501 - Data Structures & Algorithms
- CS 3102\* - Theory of Computation
- CS 3205\* - HCI in Software Development
- CS 4720\* - Mobile Application Development

- MATH 3100\* - Probability

\* DENOTES ONGOING COURSE

## Activities

- ACM
- HackCville
- Computer & Network Security Club

## Honors

- National Merit Scholar

## Skills

- Languages - C | C++ | Java | Python | Swift | CSS | HTML | JavaScript | SQL |  $\text{\LaTeX}$
- Tools - Git | Jupyter | NumPy | SciPy | Dask

## Education

### University of Virginia

Charlottesville, VA

B.S. IN COMPUTER SCIENCE

August 2019 - May 2022

- Honors: Dean's list

## Experience

### Arcturus Technologies

Leesburg, VA

SOFTWARE ENGINEER INTERN

June 2020 - August 2020

- Developed shell script to manage initiation & shutdown of Appicare agent upon startup/shutdown of monitored servers
- Implemented resource compression & minification for Appicare monitoring console to reduce transfer size by 72% & improve load times by 43%
- Stack: Bash, Java, JavaScript, Apache Tomcat

### Janelia Research Campus

Ashburn, VA

SOFTWARE ENGINEER INTERN

June 2019 - August 2019

- Developed 13 unique object masks for 3D cell volumes
- Utilized scikit-image & SciPy image processing with Dask parallelism to process larger than memory datasets
- Directly contributed to more efficient machine learning pipeline by reducing training time
- Stack: Python, NumPy, Dask, scikit-image, SciPy

### Janelia Research Campus

Ashburn, VA

DATA PROCESSING INTERN

June 2018 - August 2018

- Generated & prepared ground truth data for machine learning
- Proofread machine learning predictions & implemented corrections
- Project will automate organelle segmentation & allow for data mining of large 3D cell volumes

## Projects

### ImageFinder for Safari

INDIVIDUAL PROJECT

- Developed a macOS application which adds reverse image search to Safari as context menu options
- Published on the Mac App Store: 1500+ downloads
- Stack: Swift, JavaScript

### NCAA Tournament Simulator

INDIVIDUAL PROJECT

- Developed an NCAA tournament simulator
- 3 unique simulation strategies based on ELO ratings
- Stack: Java, JSON

### Machine Learning Research

GROUP RESEARCH

- Conducted research concerning the performance of different machine learning algorithms with respect to task efficiency & accuracy
- 3 algorithms compared across 3 unique tasks
- Gathered statistically significant results regarding situational performance of different algorithms