

# Rishov Dutta

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## EDUCATION

**UNIVERSITY OF ILLINOIS  
AT URBANA-CHAMPAIGN**  
**BS IN COMPUTER ENGINEERING**  
May 2019 | Urbana, IL  
College of Engineering

## LINKS

Github:// [rsdutta](#)  
LinkedIn:// [rishovdutta](#)

## COURSEWORK

**UNDERGRADUATE**  
Computer Systems Engineering  
Computer Architecture  
Applied Machine Learning  
Applied Parallel Programming  
Artificial Intelligence  
Cloud Computing  
Algorithms and Models of Computation  
Computer Security  
Digital Systems Laboratory

## SKILLS

### LANGUAGES

Proficient:

C++ • C • Java • x86 Assembly  
Python • Javascript • HTML • CSS

Familiar:

MATLAB • Swift • SQL • Verilog  
Frameworks/Other

Vertx • Django • Apache Spark  
Spring • Docker • Kubernetes  
React/Redux • Angular • Unix

## OTHER

### AWARDS

2017

Operating System Design Competition  
Runner-Up

2016

HackIllinois Honorable Mention

2015

Eagle Scout

### INTERESTS

Tournament Poker  
Investing  
Skiing  
Backpacking

## EXPERIENCE

### BLACKROCK | SOFTWARE ENGINEER

Jul 2019 – Present | New York, NY

- Created a new service to unify troubleshooting dashboard across 100+ clients using an asynchronous Java framework - Vertx. Used as the primary troubleshooting dashboard for Aladdin which provides near instantaneous results to users as to where trade orders are failing, etc.
- Developed a distributed caching service to reduce latency when computing compliance results during trade execution using Redis. Layered this service on top of existing workflows in C++ and Java.
- Created a portfolio simulation tool using Java and Angular to capture investing habits of portfolio managers and other users around the firm and is used daily by over 5,000 users worldwide

### BLACKROCK | SOFTWARE ENGINEERING INTERN

May 2018 – Aug 2018 | Princeton, NJ

- Developed applications using Java to report the AUM, cash flows, revenue, benchmarks, and other portfolio information to portfolio managers.

### DECISIVE ANALYTICS CORPORATION | MACHINE LEARNING INTERN

Jun 2017 – Aug 2017 | Arlington, VA

- Developed algorithms in Java to parse audio and video files to efficiently summarize them using natural language processing and differentiate the results based on semantic frames and role labeling
- Researched and implemented behavioral analysis algorithms in Python to create player tracks and visualize certain tendencies in games such as Dota 2 and Counterstrike for use by the United States Military

## PROJECTS

### RASPBERRY PI HOME SECURITY SYSTEM | SOFTWARE ENGINEER

Apr 2019 – May 2019 | Urbana, IL

Engineered home security system using two cameras and a Raspberry Pi to monitor an area using motion tracking and face detection using OpenCV. Sends images of invader to user via email as well as uploads images to dropbox

### RISC-V PROCESSOR | HARDWARE DEVELOPER

Oct 2018 – Dec 2018 | Urbana, IL

Created a 5 stage pipelined RISC-V micro-processor that supports the RV32-I instruction set with branch resolution in the EXECUTE stage, an 8 entry fully associative victim cache placed between the L2 and physical memory, and a global 2-level branch history table for branch prediction.

### BLUEDRESS CAPITAL | SOFTWARE ENGINEER

Jun 2017 – 2019 | Urbana, IL

Developed solutions using django, postgresql, and react/redux for the fund website with trade execution, stock comparison features, profit modeling, and overall fund performance. Also created a chatbot to respond to users' stock market queries using wit.ai for NLP

### LINUX KERNEL | SOFTWARE ENGINEER

Apr 2017 – May 2017 | Urbana, IL

Developed a Linux kernel which supports non-preemptive context switching, segmented memory protection, a simple read/write file system, valgrind/malloc, and drivers for keyboard input, text/audio output, and clock