

# Calvin Deutschbein

COMPUTER SCIENTIST

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## Education

### University of North Carolina at Chapel Hill

DOCTOR OF PHILOSOPHY IN COMPUTER SCIENCE

*Chapel Hill, NC*

*projected Spring 2021*

### University of North Carolina at Chapel Hill

MASTER OF SCIENCE IN COMPUTER SCIENCE

*Chapel Hill, NC*

*2017*

### University of Chicago

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

*Chicago, IL*

*2015*

### University of Chicago

BACHELOR OF ARTS IN MATHEMATICS

*Chicago, IL*

*2015*

## Experience

### University of North Carolina at Chapel Hill

GRADUATE RESEARCHER

*Chapel Hill, NC*

*2015 - present*

- Built the infrastructure and automation pipeline for Android's Espresso test framework, enabling developers to use Espresso for UI tests instead of the current, significantly slower, custom Appium-based framework. Used Jenkins, AWS EC2, and Genymotion Cloud for scalability.

### Lockheed Martin

SOFTWARE ENGINEER (INTERIM INTO FULL-TIME)

*Littleton, CO*

*2014 - 2015*

- Validate real-time operating system for Orion spacecraft

### Drizly

SOFTWARE ENGINEER INTERN

*Boston, MA*

*May. 2018 - Aug. 2018*

- Implemented a re-designed onboarding workflow with automated Salesforce integration for new customers to streamline the onboarding process for both customers and account managers.

### Facebook

SOFTWARE ENGINEER INTERN

*Menlo Park, CA*

*Jan. 2018 - Apr. 2018*

- Helped migrate the Instagram Django web server to perform parallel IO operations and handle concurrent requests within each worker process to reduce latency and increase capacity as the app scales with users and features.
- Created a framework to safely predict the performance and correctness of worker processes handling concurrent requests from a production environment. Preemptively caught and fixed regressions related to increased cpu instructions, caching, and global state contamination.

### Toast

SOFTWARE ENGINEER INTERN

*Boston, MA*

*Jan. 2017 - Aug. 2017*

- Built a microservice, database schema, and related web pages to manage customer accounts — 50,000+ created within the first two months.
- Designed and helped implement a second microservice to build the foundation for upcoming payment features and reduce technical debt.
- Enhanced the audit tool to query real-time data from restaurants' Android devices, proactively resolving customers' configuration bugs.

### CSTUY Hacking Sessions

PROGRAMMING MENTOR, TA

*New York, NY*

*Sept. 2014 - Mar. 2015*

- Taught programming concepts to high school students using Java and Processing while providing input for lesson plans and project ideas.

## Projects

### Shellfish

- A command line interface based on the Unix Bash shell, written in C.
- Supports EOF (Ctrl-D) and SIGINT (Ctrl-C), multiple commands per line, and chained redirection and piping.

**Zero Robotics**

- Semifinalist out of 200 teams in MIT's international high school programming competition in C.
- Implemented 3D vector physics and game strategy for an autonomous satellite simulation using the ZR API.