

# Chad Franzen

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## EDUCATION

### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

#### BS IN COMPUTER SCIENCE

May 2017 | Champaign, IL

College of Engineering

Highest Honors

Bronze Tablet (Top 3% of Class)

Dean's List (All Semesters)

James Scholar

Chancellor's Scholar

Cum. GPA: 4.0 / 4.0

### HARRY D. JACOBS HIGH SCHOOL

Grad. May 2013 | Algonquin, IL

ACT: 36

GPA: 4.0 / 4.0

## COURSEWORK

Data Structures

Discrete Mathematics

Computer Architecture

Systems Programming

Algorithms & Models of Computation

Programming Studio

Numerical Methods

Database Systems

Computer Security I & II

Web Programming

Communication Networks

Text Information Systems

Programming Languages

Interactive Computer Graphics

Virtual Reality

Distributed Systems

User Interface Design

## SKILLS

### LANGUAGES

10,000+ lines:

JavaScript • TypeScript • Java

1,000+ lines:

C • C++ • Python • Haskell

### TECHNOLOGIES

Web Development

Angular 1 & 2 • React • SCSS • Node.js

Express • Closure • Webpack • NPM

Systems

Google Cloud Platform • MongoDB

SQL • Git • Mercurial

## EXPERIENCE

### GOOGLE | SOFTWARE ENGINEER - NEW YORK, NY

March 2020 - Present | Google Workspace

- Front-end engineer building **video calling integrations** for Docs, Sheets, and Slides, used by 1M+ customers daily
- Engaged with cross-functional partners to develop a reusable iframe-based picture-in-picture video API.
- Co-lead for Docs-wide bug triage, diagnosing and prioritizing new bug reports daily.

Aug 2017 - March 2020 | Visual Analytics

- Designed and built novel, performant web visualizations for Google's planet-scale networking and database systems.
- Tech lead for **Key Visualizer**, which enabled critical customers (Snap, Spotify, et al.) to diagnose performance bottlenecks in GCP databases like Bigtable.
- Developed new algorithms and implemented advanced Angular optimizations to achieve 100x performance increases on large datasets.

### UNIVERSITY OF ILLINOIS | TEACHING ASSISTANT - CHAMPAIGN, IL

Aug 2016 - Dec 2016 | CS498: The Art of Web Programming

- TA for 400-level undergraduate course that taught modern full-stack web development (Angular, Node.js, MongoDB) as well as design and UX principles.
- Developed exam questions, created VMs and starter code for programming projects, and wrote and delivered lectures on web development topics.

### GOOGLE | SOFTWARE ENGINEERING INTERN - NEW YORK, NY

May 2016 - Aug 2016 | Search

- Designed and implemented a dashboard for debugging and analyzing NLP-based Knowledge Graph answers in search results.
- Surfaced data from across Google's search stack to produce actionable insights about search quality.

### SPROUT SOCIAL | WEB ENGINEERING INTERN - CHICAGO, IL

May 2015 - Aug 2015

- Primary engineer for front-end development of the **Message Approval** feature, a major new revenue driver.
- Refactored legacy code to use modern React components and ES6 syntax.

## RESEARCH + PUBLICATIONS

### UIUC DATA DRIVEN DESIGN GROUP | UNDERGRADUATE THESIS

Aug 2016 - May 2017 | Champaign, IL

- Worked with **Prof. Ranjitha Kumar** and Ph.D candidates to mine crowdsourced design and interaction data for 9.7K Android apps, and design a system for usability testing arbitrary Android apps at scale.
- Extended the **OpenSTF** project to allow Amazon Mechanical Turk workers to remotely control Android phones and collect rich interaction data.
- Built web apps and visualizations for aggregating and analyzing collected data.
- Work was published in two papers in ACM UIST 2017:  
**Rico: A Mobile App Dataset for Building Data-Driven Design Applications**  
**ZIPT: Zero-Integration Performance Testing of Mobile App Designs**