## HARSH DEEP

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## **EDUCATION**

#### University of Illinois at Urbana-Champaign

Bachelor of Science in Computer Science and Statistics **Courses**: Data Structures, Systems Programming, Cognitive Engineering (grad), Statistical Analysis, Statistics and Probability I&II, Methods of Applied Statistics

### **EXPERIENCE**

#### University of Illinois at Urbana-Champaign

REU Intern – Human Computer Interaction

- Collaborated in a team of 4 researchers that developed an accessible live broadcast player (React, Redux, DvaJS), creating the first widely accessible Board of Trustees operation across 3 universities.
- Implemented ARIA support on 3 different website features and fixed keyboard accessibility for 28 actions.
- Filed 27 issues accessibility and feature improvements, outlining a future roadmap for a team of 10+ developers.

#### University of Illinois at Urbana-Champaign

Head Course Staff

- Co-led a group of 200+ undergraduate and graduate staff teaching CS to 600+ students in Java and Kotlin.
- Spearheaded an initiative that selected 17 reading articles exploring the ethics and diverse issues of CS that impacted 8-16% of weekly exam grades.
- Established a new check-in and meeting structure with 124 total responses to uplift diverse staff opinion.
- Awarded the Fisher Outstanding Course Assistants award, given to 3 people across the CS department.

#### **Abstractive Labs**

Software Engineering Intern

- Created a distributed Slack chatbot framework in Ruby by extracting common functionality from a supply chain management system.
- Reduced the codebase by 2000+ lines of code removing the business specific logic while keeping core functionality intact allowing other open-source contributors to engage with the project.

#### Harshita Apps

Backend Developer

- Implemented the backend of Crypto Price Tracker App (JavaScript, ExpressJS), streaming live tracking of 1000+ currencies across 30+ exchanges to iOS devices.
- Reached the top iOS app download charts in India (Overall) and the United States (Finance), requiring scaling the
  Firebase application infrastructure to 100k+ users.
- Optimized infrastructure using concurrency to reduce cloud costs by 48% after startup exit acquisition by Bay Area VC firm Redwood City Ventures.

## PUBLICATIONS

# **What's This? A Voice and Touch Multimodal Approach for Ambiguity Resolution in Voice Assistants (4<sup>th</sup> Coauthor) 2021** 23rd ACM ICMI - International Conference on Multimodal Interaction - 10.1145/3462244.3479902

 Measuring Complacency in Humans Interacting with Autonomous Agents in a Multi-Agent System (2<sup>nd</sup> Coauthor)
 2020

 SPIE Artificial Intelligence and Machine Learning for Multi-Domain Operations Applications II - 10.1117/12.2559474
 2020

## ACTIVITIES

#### Summer of Side Projects - 125summer.tech

Founder and Head

- Created an informal class to help people kickstart 65+ side projects with 162 students from 12 countries.
- Handled the organization, managed the forum, gave individualized project feedback, and managed 10 staff.
- Held 5 different code-along workshops in Python and JavaScript Chatbots, Web Scraping, Fancy Command Line Interfaces, Browser Extensions, and React.
- Invited as one of two undergraduates to present the program at the <u>Inaugural Illinois Computer Science Teaching</u> <u>Workshop</u> to an audience of over 100 educators from several countries.

## SKILLS

LanguagesJava, Ruby, Python, JavaScript, TypeScript, Kotlin, C/C++, Golang, C#TechnologiesRails, React, NodeJS, RabbitMQ, Linux, Git, Selenium, PostgreSQL, Docker, Firebase, AWS

Aug 2018 - May 2022 Cumulative GPA: 3.70/4.0

## Jan 2021 – May 2021

Jun 2021 – Aug 2021

Dec 2017 – Jul 2018

May 2020 - Aug 2020

April 2021 - Present