

# Mudit Arora

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## SUMMARY

Software Engineer with expertise with strong foundations in Agile Methodologies, Web Development and App Development Fundamentals. Adept at collaborating with cross-functional teams to deliver scalable solutions that meet business objectives. Driven by solving complex problems through innovative technologies and enhance user experience.

## SKILLS

**Programming Languages/Software:** Python, JavaScript, Swift, , R programming, HTML/CSS, C++, Java, MATLAB, MySQL

**Frameworks/Technologies/Tools:** Pandas, NumPy, Matplotlib, scikit-learn, PyTorch, TensorFlow, Keras, Django, Flask, SwiftUI, UIKit, Node.js, React.js, AWS, Azure, Git

**Certifications:** Technical Interview Prep (CodePath), Web Development (CodePath)

## WORK EXPERIENCE

### Machine Learning Researcher

Aug 2023 – May 2024

Mayo Clinic

Tempe, AZ

- Fine-tuned **Google's T5**-based Large Language Model using **Python**, **PyTorch**, and **scikit-learn**, achieving **87% accuracy** in extracting social determinants of health from clinical notes and predicting patient readmission within 30 days.
- Assisted hospitals in **reducing admission rates**, leading to **cost savings** in patient care management and improved clinical decisions.

### Software Engineering Tutor

Feb 2022 – May 2024

Academic Support Network, Arizona State University

Tempe, AZ

- Mentored **20+** students weekly through personalized learning strategies, driving substantial improvements in study effectiveness.
- Facilitated high-level courses including Math, Statistics, and Programming (**Python**, **C++**, **MATLAB**), leading to an average performance **boost of 36%** and enhanced understanding in these subjects among the students.

### Software Quality Assurance Intern

May 2022 – Aug 2022

Knight Transportation

Phoenix, AZ

- Innovatively implemented an agile approach, authoring detailed test cases and effectively resolving critical bugs via **Microsoft Azure DevOps** and **Elasticsearch**; optimized development processes, resulting in a **28% reduction in bug resolution** time.
- Orchestrated a collaborative effort with Backend Engineers to optimize User Experience, resulting in a **42% increase in app engagement** and a **23% decrease in user complaints**.

## PROJECTS

### Socially Unsocial

- Developed a full-stack social social media application using **React.js** and **Supabase** featuring dynamic creation with multimedia support, real-time comment functionality, and content filtering capabilities. Architected comprehensive features including upvote mechanics, search functionality, and user authentication while achieving **37% faster** load times through optimized state management.

### Multi-Lingual Emotion Detection System – SemEval 2025

- Architected both **LSTM** and **BiLSTM** models using **PyTorch** for single and cross-language scenarios, achieving **F1 scores of 0.35 and 0.33** respectively by language-aware attention mechanism, **FastText embeddings**, and extensive data preprocessing techniques.

### ParkPal

- Utilized **Swift** and **SwiftUI** for **MVC architecture** to build an iOS app that locates nearby parking spots with directions and **CoreData** integration for saving favorite parking spots, leveraging **Google Cloud's API** to **enhance user experience by 43%**.

### MoodSnap

- Designed and built a web-based emotional journaling application at CalHacks using **Reflex** (Python-based React framework). Developed a BeReal-inspired platform that prompts daily emotional check-ins, enabling users to track mood patterns and foster authentic connection, gathered **80+ beta users** during the event.

## EXTRACURRICULAR ACTIVITIES

### Vice President, Google Developer Student Club

Jan 2023 – May 2024

- Enhanced training quality and industry-relevant skills through instructional material improvements and technical workshops, overseeing club operations for **8+ core team members** and **12+ technical project leads**. **Grew the club to 1500+** ASU members and increased social media visibility by **40%** through strategic content planning.

## EDUCATION

### Master of Science, Natural Language Processing

Jun 2026

University of California, Santa Cruz

Santa Clara, CA

- **Relevant Courses:** Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing

### Bachelor of Science, Computer Science

May 2024

Arizona State University

Tempe, AZ

- Magna Cum Laude holder (GPA: 3.77), Dean's List holder & New American University Scholar
- SUN Award holder (demonstrating leadership, supporting students' success)
- **Relevant Courses:** Data Structures & Algorithms, iOS Mobile App & Full-Stack Web Dev, Software Engineering, Database, OS