Soumay Agarwal

San Diego, CA 92093

Education

University of California San Diego

Expected June 2026 San Diego, CA

M.S. in Computer Science

Aug. 2020 - May 2024

University of Arizona

Bachelors of Science in Computer Science — GPA: 3.97/4.0

Tucson, AZ

Summa Cum Laude | Global Wildcat Scholar — \$30,000/year award | 2020-2023 Highest Academic Distinction

Relevant Coursework

• Web Development

• Software Engineering

• Algorithms

• Data Visualization

• Mobile Programming

Data Structures

• Database Design

• Recommender Systems

Experience

UpliftyAI

Android App Development and AI/Machine Learning Algorithm Engineering Intern

Remote

- Contributed to Android app development for a productivity-focused social media platform, implementing user interface components and core functionality using Java and Android Studio to enhance user engagement and platform usability.
- Conducted comprehensive research and development for AI-driven content feed algorithms including Markov Decision Process model usage.

University of California San Diego, Design Lab

Jan 2025 - Current

July 2025 - Current

Graduate Student Researcher

San Diego, CA

- Developed custom data extraction protocols for medical sensors including InfiRay thermal camera and Anykit otoscope bypassing native applications to enable direct sensor communication and data retrieval.
- Conducted comprehensive testing and validation of sensor communication protocols to support HCI research initiatives under Dr. Eliah Aronoff Spencer.

University of Arizona Health Sciences

July 2023 - May 2024

Software Development Intern

Tucson, AZ

- Designed and implemented a real-time data streaming dashboard for a research project, leveraging MQTT messaging protocol to collect sensor data and visualizing it through interactive JavaScript-based graphs.
- Worked on hosting the Corelink network framework, licensed under the MIT license, locally at the University of Arizona using JavaScript, to stream real-time data from multiple sensors.

Projects

Trestaurant | Java, Android Studio, Firebase

- Built an Android app using Java, incorporating the Google Places API for nearby restaurant search, place details, and photo retrieval, providing users with up to 10 images of each restaurant.
- Developed a swipe-based interface based on Tinder (left to dismiss, right to save) for users to explore and curate a personalized list of liked restaurants, enhancing engagement through interactive decision-making.
- Integrated Glide to load and display high-quality restaurant photos and used Google Maps Intents to offer seamless navigation and detailed information for liked restaurants.

Thrive $\mid React, MongoDB$

- Developed using SCRUM, this 4-person project focuses on plant care, allowing iterative progress and teamwork.
- Utilized MongoDB for data storage and Axios for seamless communication between the React front and back end.
- Implemented marketplace interactions and combined them with user sign-up/login, plant directory filtering, personalized gardens, journaling, and reminder settings.

Soccer Pose Decoder | Python, OpenCV, MediaPipe

- Developed an AI-driven body language detection system using Python, OpenCV, and MediaPipe to analyze real-time video feeds and predict poses of famous soccer players.
- Trained a neural network on celebrity pose data, achieving over 95% detection accuracy.
- Streamlined real-time processing with OpenCV and MediaPipe for efficient pose recognition, enhancing its application in sports analytics and interactive fan experiences.

Technical Skills

Languages: Python, Java, C, HTML/CSS, JavaScript, SQL

Developer Tools: Git, JSON, Firebase, VS Code, Eclipse, Android Studio, Unity

Technologies/Frameworks: Linux, MongoDB, Express, Node, Firebase, OpenCV, TensorFlow, Keras