

# SHARANYA DABAS

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## EDUCATION

### Cornell University

Bachelor of Science in Computer Science

Current GPA: **3.8**

Ithaca, NY

Expected Graduation May 2026

Relevant Coursework: Object-Oriented Programming & Data Structures, Functional Programming, Backend Development, Language Retrieval, Computer Organization, Embedded Systems, Linear Algebra, Discrete Structures, Calc I-III

## TECHNICAL SKILLS

**Languages:** Python, Java, C, OCaml, JavaScript, HTML, CSS, Bash, PowerShell,

**Developer Tools:** AWS, GCP, SQLite, Git, GitHub, Postman, Visual Studio Code

**Frameworks:** Flask, Docker, React, NextJS

**Libraries:** OpenCV, Selenium, NumPy, Matplotlib, Scikit-learn

## EXPERIENCE

### Software Developer

Cornell Cup Robotics

January 2024 – Present

Ithaca, NY

- Ported existing vision system to new XRP architecture
- Utilized OpenCV to enhance the vision system's performance and reliability
- Tracked the robot's orientation and direction based on AprilTag data for precise navigation
- Collaborated with team to integrate the updated vision system with the robot's control system

### Cashier and Floor Manager

Shiva Bazaar

July 2018 – Present

Norwood, MA

- Learned professional customer service and supply chain knowledge
- Built essential relationships between supplier and vendor

## PROJECTS

### ➤ Exercise Search Engine | Python, JavaScript, HTML, CSS

- Developed a search engine utilizing SVD to find similarity between query and result exercise
- Implemented dropdown and ad-hoc search to find exercises based on query and filters
- Scraped multiple fitness websites using Selenium to build dataset
- Containerized the application via Docker and deployed to AWS ECS using Fargate launch type

### Accelerometer-Driven Game Controller | C, Python

- Developed a game controller in C using the FRDM-KL46Z microcontroller
- Utilized the onboard accelerometer to detect tilt inputs on the x-axis
- Designed a Doodle Jump game using Pygame, where accelerometer inputs were sent via UART communication

### Database Management System | OCaml

- Created tabular data structure that can take in CSVs and provide analysis on the data
- Supports mapping, filtering, and reducing with custom functions on individual columns in the table
- Utilized functional paradigms such as recursion and pattern-matching

### ➤ Etch-a-Sketch | JavaScript, HTML, CSS

- Developed a stylized, pixelated canvas where users can draw using their cursor
- Designed a UI where users can change grid size, cursor mode, and color choice

### Maze Navigator | Java

- Wrote, tested, and optimized algorithms to navigate graphs using several key data structures
- Utilized synchronization to minimize CPU usage while concurrently running GUI and back-end