Akshay Aravind

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EDUCATION

Cornell University, College of Engineering   **Ithaca, NY**
GPA: 3.95/4.00 ~ B.S Computer Science, Minors in Math & AI   *May 2026*
Relevant Courses: Intro to Machine Learning, Analysis of Algorithms, Data Structures & OOP, Discrete Math, Statistics, Calc III

TECHNICAL SKILLS

● **Languages**: Python, Java, C#, OCaml, JavaScript, Powershell, HTML/CSS, C++, SQL, LabVIEW
● **Technologies**: React, ChatGPT, Prompt Engineering, .NET, LangChain, Angular, Java Swing, FastAPI, RESTful API
● **Developer Tools**: Git, MySQL, MongoDB, Visual Studio, IntelliJ, Docker, Postman

EXPERIENCE

Microsoft   **Redmond, WA**
Software Engineer Intern   *May 2024 - Present*
Tech Stack: C#, Powershell, Azure CLI, .NET Framework, Visual Studio Enterprise
● Collaborating with **5+** engineers on products dealing with cloud edge scenarios including **Azure Stack Hub** and **Azure HCI**
● Designing a sideloading tool to enable a workflow to populate the Azure Marketplace in **disconnected** cloud scenarios
● Implementing product downloading tool using **C#** and **.NET** to store product data in **Azure storage accounts** and **Cosmos DB**

Cornell Mars Rover   **Cornell University**
Controls Software Team Lead   *Oct 2022 - Present*
Tech Stack: C++, Python, OpenCV, LabVIEW, Docker, Git
● Leads the software subteam on Cornell's premier robotics team that competes yearly in the **University Rover Challenge**
● Implements **autonomy** software for the rover with **OpenCV** and **C++**, improving self-driving functionality by over **35%**
● Interfaces with on-board hardware through **LabVIEW** and **Python** scripts, autonomously collecting data from soil samples

Abris   **Andover, MA**
Software Engineer Intern   *June 2023 - Aug 2023*
Tech Stack: React, Angular, FastAPI, LangChain, Python, OpenAI API, ChatGPT, Pinecone, Git
● Spearheaded the development of **3+** different projects at Abris, a tech startup focusing on novel applications of **AI technology**
● Integrated product retrieval on **Pinecone** databases for [uprate.ai](#) by interpreting **user chats** sent to a chatbot to fetch product data
● Leveraged **React** and **LangChain** to develop interactive UIs with **AI functionality**, increasing user engagement by over **30%**

Campbell Lab   **Boston University**
Computational Biomedicine Research Intern   *May 2023 - Apr 2024*
Tech Stack: R, Python, Shiny, Git
● Develops data analytics software as a paid intern for **Dr. Joshua D. Campbell's** Computational Biomedicine Lab at BU
● Contributes to **open-source** packages, actively working on **5+** package functionalities, expanding on source code by **over 15%**
● Implements **plotting** and **data analysis** functions in R packages that handle large genomic datasets of over **500k** data point

PROJECTS

FitnessAI ~ [Demo](#)   **Personal Project**
Tech Stack: React, Python, LangChain, FastAPI, OpenAI API, ChatGPT   *June 2023 - July 2023*
● Created an **AI app** using **React**, comprised of a fully interactive **fitness chatbot** and workout generator built from scratch
● Leveraged **ChatGPT 3.5** to generate advice based off of user inputs, utilizing **LangChain** for autonomous prompt engineering

singleCellTK Package ~ *[github.com/akshayarav/singleCellTK](#)*   **Campbell Lab**
Tech Stack: R, Shiny, Python, Git   *June 2023 - Present*
● Contributed to the **open source** singleCellTK R package produced by the Campbell Lab for analysis of single cell RNA-seq data
● Implemented a **bubble plot visualization and scaling tool** that aggregates large RNA-seq data using the **ggplot2** R package

Autonomous ArUco Tag Detection   **Cornell Mars Rover**
Tech Stack: C++, Python, OpenCV, Docker   *Mar 2023 - Apr 2023*
● Implemented **computer vision** software for ArUco tag detection in the autonomous portion of rover competition using **OpenCV**
● Precise pose estimation enables autonomous navigation with **95% accuracy**, accurately identifying markers from **30+** feet away

IMC Trading Prosperity Challenge   **Coding Competition**
Tech Stack: Python, Jupyter Notebook, Matplotlib, pandas, Git   *Mar 2023*
● Placed in the **top 10%** of competitors through collaboration with a team of **4,** coding over a 10 day sprint of **5 rounds**
● Analyzed simulated market data in large CSV files of **100k+ lines** with pandas, effectively visualizing data using Matplotlib

Interests: Lifting and Health, Boston Celtics, Rap and Hip Hop, Piano, Traveling, Competitive Video Games