


# Aryan Vij

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## EDUCATION

### University of California, Berkeley

GPA: 3.92/4.0

College of Engineering, B.S. in Electrical Engineering and Computer Science

Expected May 2026

- **Relevant courses** –Data Structures and Algorithms (CS61B), Discrete Mathematics and Probability Theory (CS70), Principles and Techniques of Data Science (DataC100), Efficient Algorithms and Intractable Problems (CS170), Computer Architecture (CS61C)

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## SKILLS

- **Programming Languages:** Python, Java, Javascript, Typescript, C++, Swift, Scheme, HTML, CSS
- **Tools/Frameworks:** NextJs, ExpressJs, Flask, Firebase, Tensorflow, Docker, AWS, DigitalOcean, PyTorch, NumPy, Pandas, Keras, Git, Junit, Pickle

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## PROFESSIONAL EXPERIENCE

### Shasta Health (YC S23), *Software Engineering Intern, San Francisco, CA*

June 2024 – Aug 2024

- Accelerated healthcare provider onboarding time by **50%** through developing a **NextJS** and **Firebase** platform with **RESTful APIs** and **Cypress** testing
- Drove **25%** reduction in travel costs by developing a Google Maps React component that optimized providers' routes and enhanced patient experience
- Pioneered customizable pose detection and video library using **MediaPipe**, **OpenCV**, and **Three.js** for enhanced after-session therapy exercise care

### Kern Volunteers United, *CTO & Co-Founder, Bakersfield, CA*

Jan 2024 – Present

- Drove **23,000+** volunteer signups by engineering a volunteer management system with **NextJS**, **Node.js**, and **Firebase**, catalyzing impact for NGOs
- Lead a team of **8 engineers** in enhancing KVVU's platform using agile methodologies, **Docker**, and **AWS**, ensuring high system reliability and growth
- Forged partnership with global NGO **United Way** to bring KVVU's platform and services to communities across California state

### My AI Front Desk, *Product Management Intern, San Francisco, CA*

July 2024 – Present

- Launched innovative AI call dialers product, scaling from zero to projected **\$10,000 ARR** within two weeks, demonstrating rapid market adoption
- Led cross-functional team of **8** to develop AI product, leveraging **Ngrok**, **Twilio**, and **Node.js** while managing customer relations and product iterations
- Engineered AI marketing tools leveraging social media **APIs**, OpenAI's **DALL-E 2**, and **ElevenLabs'** voice synthesis to boost SEO and digital presence

### Government Technology Agency (GovTech), *Research Intern, Singapore*

Jan 2021 – Mar 2021

- Propelled **12%** efficiency boost in Singapore's COVID tracing, optimizing Bluetooth systems using Java and engineering ReactJS demand-supply portal
- Reduced human contact in airports by **40%** during COVID through AI-powered robots, leveraging **OpenCV** and **TensorFlow** for image segmentation
- Piloted the deployment of data sensors in **4** Smart Gardens, aligning with Singapore's Smart City initiatives and enhancing urban greenspace management

### MS Softwares, *Technical Intern, Vancouver, Canada*

Nov 2019 – Mar 2020

- Pioneered CCTV-guided heating systems using crowd counting, mapping **30+** public areas to optimize Vancouver's urban energy efficiency
- Engineered scalable **CSRNet** for variable image sizes, enhancing performance through custom **Keras** data generator and targeted training strategies

### Singapore Armed Forces, *Officer, Singapore*

Apr 2021 – Feb 2023

- Mentored **120** emerging Officer Cadets as an Artillery Instructor, fostering leadership skills and disciplinary foundations in future commanders
- Conducted UAV and drone trials aimed at substituting high-risk tasks in combat scenarios across diverse terrains and conditions internationally

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## PROJECTS

### AI Fitness Tracker, *Personal Project, Singapore*

Jan 2022 – Aug 2022

- Developed computer vision push-up tracker using **Python**, **OpenCV**, and **MediaPipe's** pose detection model to mirror Army's test center requirements
- Increased soldiers' fitness test success rates by **30%**, piloting program with **400** participants and partnering with Army's technical advancement team
- Authored Medium article garnering **22,000 views**, detailing initial test code and concept of the project, showcasing its community impact

### StudyAssistant, *Personal Project, Berkeley, CA*

May 2024 – July 2024

- Engineered AI platform for PDF interaction using **NextJS** and **OpenAI Embeddings**, featuring **RAG** and dynamic highlighting with sentence triggers
- Developed semantic chunking methods by integrating **SBERT** with custom algorithms to assess distances between chunks, improving RAG by **15%**
- Optimized storage and retrieval mechanisms by integrating **pgvector** with a **PostgreSQL** database, boosting efficiency and scalability of data handling

### DonnaAI, *Personal Project, Berkeley, CA*

Jan 2024 – Mar 2024

- Programmed a MacOS personal assistant using **Swift**, integrating OCR and audio capture via **ScreenCaptureKit** to enhance user data interaction
- Utilized **TF-IDF** embedding techniques to represent captured data, storing in an **SQLite vector database** for efficient retrieval and processing
- Implemented RAG using **Annoy** for efficient semantic search, leveraging local **small language models** to optimize query resolution based on complexity

### Stereo Vision, *Personal Project, Singapore*

Jan 2021 – Apr 2021

- Reduced depth-sensing camera costs by **40%** versus Intel RealSense, developing system using Nvidia's Jetson Nano and Raspberry Pi for robotics projects
- Designed depth mapping system using **OpenCV** and **Nvidia's Object Detection** model, enabling accurate object distance measurement in real-time