Pranav Ramachandra

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Education

University of California, Berkeley — **Dec 2024**
B.S. Chemical Engineering, Minor in Data Science
Coursework: Data Structures & Algorithms, OOP, Machine Learning, Probability & Statistics, Bioinformatics, Machine Structures, Data Mining, Quantum Mechanics, Transport Phenomena, Distributed Systems

Experience

Spotify | *Incoming Data Engineer* — **May 2025 - Present**

Bicameral | *Software Engineering Intern* — **Jan 2025 – Mar. 2025**
– Built and deployed feature that enables text-based LLM processing of spreadsheets/PDFs with 100+ users
– Decreased load & querying time for documents by 2x by implementing lazy loading and asynchronous queries
– Built and deployed the CI/CD platform with GitLab; built and hosted prod/dev environments using EC2

QuantumScape | *Software Engineering Intern* — **May 2024 – Aug. 2024**
– Built & deployed CNN with PyTorch detecting signal anomalies with 95% accuracy saving $50,000 annually
– Built tool-metrics pipeline w/ GCP Cloud Dataflow & BigTable increasing defect detection rate by 15%
– Saved $1,000/day & reduced third-party inference API calls by developing an in-house-API using ClearML

Tesla | *Data Science & Cell Engineering Intern* — **Jan. 2023 – Aug. 2023**
– Developed physics-based features on defect classification pipeline with PyTorch, increasing accuracy by 0.1%
– Proposed 'formation-less' cells from A/B testing and experimental trials; predicted savings of over $1.2M/day
– Reduced time of cell formation by 5% using electrochemical experiments & analysis, saving $300,000 per day

Lawrence Berkeley National Laboratory | *ML & Chemistry Researcher* — **Sep. 2021 – May 2024**
Advisor: Professor Bryan McCloskey
– Using regression on time-series data studying pulse-formation on Li-ion batteries, reducing Li-loss by 50%
– Investigated effects of silica-doped electrolytes in batteries; saw 20% decrease in impedance growth in cycling
– Engineered a custom battery to increase NMR signals in electrolyte solutions by >5x; studied H2 evolution

Amazon Web Services | *Contract Software Developer* — **Sep. 2022 – Mar. 2023**
– Developed dashboard for Telco companies to study factors contributing towards their total cost of ownership
– Engineered a web application for AWS employees to input customer needs and server sizes of cloud models
– Created an API + dashboard connecting backend database & algorithm calculations; saved financial data

Projects

SquatBuddy: Computer Vision Workout Assistant | *TF, FastAPI, GCP, React* — **June 2024 – Pres.**
– Built app hosting MLP model of users performing a barbell back-squat to detect incorrect movement patterns
– Hosted an ETL pipeline with GCP & AWS S3 for fast video processing; achieved 95% TPR with video model

Workout Tracker | *Flask, Twilio, Gemini, MongoDB, Heroku* — **Nov. 2024 – Jan 2025**
– Developed a personalized dashboard that updates via SMS (Trello + Gemini) when a user submits a workout
– Stores data in MonogDB, pulls AI powered analytics to display prevous metrics and next optimal workout

Extracurriculars

Paradigm Consulting | *Project Manager & Software Consultant* — **Jan 2022 – Aug 2023**
– Rebuilt UI/UX experiences on drug information and login portals for Johnson & Jonhson (Jansen) patients
– Developed strategies to leverage cloud computing and hyperscaler infrastructure for Juniper Networks

Innovate@Berkeley | *Lead Coordinator* — **Sep. 2022 – Dec. 2022**
– Lead 10 people to host UC Berkeley's biggest startup event, hosting 30+ companies & 10+ VC speakers
– Ran pitch challenge with 20+ participants; hosted 400+ people; lead marketing campaigns/outreach events

Skills & Interests

Skills: Python, Pytorch, AWS, C++, Java, Go, SpringBoot, MySQL, Spark, React, Kubernetes, Google Cloud
Interests: Running, Leg Day, Stews, Chicago Bulls, Drip Coffee, Gorpcore, Smash Burgers, House Music