Abhinav Balla

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Expected Graduation: May 2026
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Open to Relocation
Citizenship: U.S.

Education

- **University of California, Berkeley** — Berkeley, CA
  Double Major in Computer Science & Data Science, Business Analytics D.E.
  - **Related Coursework**: Operating Systems, Machine Learning, Artificial Intelligence, Computer Architecture, Data Structures & Algorithms, Discrete Math and Probability Theory, Principles & Techniques of Data Science
  - **Programming Languages**: Python, Java, JavaScript, C++, C, SQL, R, HTML, CSS, Typescript, Golang
  - **Technologies**: MySQL, PostgreSQL, Pandas, Numpy, Tensorflow, PyTorch, Spark, CI/CD, Scikit Learn, Linux, Unix, Databricks, Tableau, REST APIs, FastAPI, React, Flask, Node.js, Terraform, Git, Docker, Figma, AWS EC2, S3, Microsoft Azure, Google Cloud, Zapier, n8n, Ansible, Kubernetes, Jenkins

Experience

- **Wells Fargo** — San Francisco, CA
  Software Engineer Intern — *Jun. 2025 - Aug. 2025*
  - **AKS Deployment Automation**: Created an Ansible playbook to automate microservice deployment to Azure Kubernetes Service (AKS) using Ansible Automation Platform, replacing Harness CD.
  - **Scalability Optimization**: Enabled deployment scalability to increase by 2x, allowing significantly more jobs to run concurrently on the infrastructure.
  - **Kubernetes Service Validator**: Developed a Python-based validator to ensure Kubernetes service YAML files created by the Cloud Operations team included all required parameters, improving deployment reliability and consistency.
- **Alkira** — San Jose, CA
  Software Engineer Intern on Infrastructure/Platform Team — *Jun. 2024 - Aug. 2024*
  - **Full-Stack Application**: Developed a full-stack application for margin analysis, used for analyzing opportunity cost, revenue, and total utility of money spent on cloud accounts, using Flask, Python and PostgreSQL.
  - **Cloud Monitoring Dashboard**: Created a dashboard for network vulnerability scans across cloud providers like AWS and Azure using Python and PostgreSQL.
  - **Cost Savings**: Projected to save 40% in cloud provider costs through automation of searching and deleting unused cloud accounts or leaks.
- **PipeIQ** — Remote
  Machine Learning/Full Stack Engineer Intern — *Jun. 2023 - Aug. 2023*
  - **Integration Development**: Developed integrations for HubSpot, LeanData, etc. by leveraging REST APIs and Postman, deploying endpoints on AWS and displaying integrations on front-end using JavaScript.
  - **LLM Fine-Tuning**: Enhanced functionality of the app's LLM using OpenAI's API with 90% accuracy in customer query resolutions and utilized AWS Sagemaker and Jupyter Notebook for AI model development.
  - **Database Automation**: Alleviated database processes by clarifying SQL constraints, developed 5 different integrations using OAuth Flow 2.0, and improved contact database framework.

Projects

- **FedEx Router Assistant**: Created a supervised model predicting delivery times and optimizing route assignments using Sci-Kit Learn, Pandas, Tensorflow, and Dijkstra's algorithm. Reduced route assignment times by 80%.
- **Tile Adventure**: Developed a tile-based, keyboard-interactive game in Java with seed-based random world generation, featuring save, quit, replay, and load game functionalities.
- **Smart Environmental Monitoring System**: Created a device for analyzing air quality, radiation levels, light intensity, and temperature with real-time data relay to an app interface using Flask, Plotly.js, Pandas, and Numpy.
- **Face ID Website Blocker for Chrome**: Captured an initial reference image for user registration and performed real-time facial verification against the stored reference image using OpenCV for face detection and feature extraction.
- **PinPoint**: Built a web-based 20-questions-style guessing game in TypeScript where players identify cities or countries based on yes/no questions; integrated OpenAI API to generate dynamic responses and Supabase for daily-resetting leaderboards and multiplayer tracking.