

# Parshv Patel

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## Education

University of California, Berkeley | GPA: 4.0

Berkeley, CA

B.A: Data Science | Concentration: Industrial and Business Analytics

Expected Graduation: May 2029

**Awards:** Dean's list; Amazon Future Engineer; Greenhouse Scholar, MLT Ascend Scholar, CAA Leadership Scholar, GFWC National 1st Place, Honorable Mention for Undergrad Research Prize, Valedictorian, AP Scholar with Distinction, IMO Gold Medal for level 1.

**Certification:** [IBM Data Science Professional Certificate](#), [Python for Everybody Specialization](#), [SQL for Data Science](#), [Commonwealth Bank Data Science Job Simulation](#), [Deloitte Data Analytics Job Simulation](#), [CodePath AI Engineering](#), [Data Structure](#), [Linear Algebra](#)

## Relevant Technical Skills

**Languages:** Python, SQL, Java, JavaScript

**Machine Learning:** Scikit-learn, Pytorch, Keras, Supervised and Unsupervised Learning, Deep Learning, Computer Vision

**Tools:** Numpy, Pandas, Matplotlib, Seaborn, Folium, Plotly, Dash, Tableau, Excel, BeautifulSoup, GridSearchCV, Flask, Git, OpenCV

## Internship

Amazon | *Software Engineering Intern*

Seattle, WA | Summer 2026

- Will engineer scalable solutions and apply ML-driven data pipelines to high-impact, customer-facing production systems.
- Will collaborate with cross-functional engineering teams in an agile environment to design, test, and ship production-grade features.
- Will develop and optimize data-driven systems using AWS, Python, and internal Amazon tooling at scale.

## Relevant Projects

[Fashion Multimodal Search Engine](#) | [ML + IR + Full-Stack](#) | *Python, FashionCLIP, FAISS, BM25, FastAPI, Next.js 15*

- Architected a multimodal semantic search engine over 29,000+ ASOS products using domain-adapted FashionCLIP; built hybrid retrieval combining dual FAISS ANN indexes with BM25, fused via Reciprocal Rank Fusion for text, image, and cross-modal queries.
- Engineered a 9-step NLU pipeline with regex intent parsing, catalog-trained spell correction, 5-template prompt ensembling, and intent-weighted reranking; implemented progressive filter relaxation for non-empty results, deployed on HuggingFace & Vercel.

[AtlasMind AI Trip Planner](#) | [AI SaaS, Full-Stack](#) | *Python, FastAPI, React, PostgreSQL, LangGraph, LangChain, Stripe*

- Architected a production AI trip planner using a 6-agent LangGraph workflow to generate personalized itineraries rapidly; ensured high availability through multi-provider LLM routing across 10 API keys with intelligent health scoring and automatic failover.
- Engineered Stripe Free/Pro subscriptions with real-time usage tracking, webhook handling, and automated quota enforcement; secured the platform with Google OAuth, JWT, CSRF tokens, rate limiting, and a Lighthouse-optimized PWA scoring 95+ performance.

[Parking Spot Detection System](#) | [Computer Vision + ML](#) | *Python, OpenCV, NumPy, scikit-learn, PyTorch*

- Built end-to-end parking occupancy pipeline from 1920×1080 video; segmented spots via connected components, generated balanced dataset by sampling frames, then trained SVC, Random Forest, and CNN models, achieving 99% accuracy with GridSearchCV.
- Implemented real-time inference with red/green slot overlays and live availability counts; optimized performance by inferring every 30 frames and reclassifying only on pixel-difference thresholds for smooth near real-time output.

[AI Text Summarizer](#) | [NLP + Full-Stack](#) | *Python, PyTorch, FLAN-T5, SAMSum, FastAPI, React, Vite, Groq*

- Fine-tuned FLAN-T5 on 16,000+ dialogues using a custom PyTorch pipeline with mixed-precision training and checkpoint resumption, achieving an ROUGE-1 score of 43.53 for 4 configurable training profiles; deployed with auto-scaling infrastructure.
- Built production React frontend with Vite, Tailwind, Framer Motion, achieving 60fps performance; engineered FastAPI backend with Groq LLM integration, delivering sub-second inference, validated through comprehensive 35 test cases with 100% pass rate.

## Research Papers

[Uncovering Bias: Impact of Teacher Attributes on Student Evaluation](#) | *Under Review for Publication*

Author | Mar 2025

- Applied statistical analysis, hypothesis testing, and regression modeling to teaching evaluations, identifying statistically significant correlations between appearance and student ratings, exposing implicit bias, and informing fairer academic assessment policy.

[Algorithmic Bias and Ethics in AI Decision-Making Systems](#) | *Under Review for Publication*

Author | May 2025

- Investigated how automated systems encode human bias across hiring, finance, and criminal justice through technical case studies; synthesized computational findings with narrative storytelling to drive home the societal urgency for ethical, transparent, and fair AI.

## Leadership & Professional Development

Math Club | *Founder & President*

Aug 2024-April 2025

- Grew the Math Club to over 25 active students, leading quizzes and tutoring that boosted student confidence in problem-solving.
- Created tiered learning groups and peer mentorship programs, fostering inclusive leadership and collaboration.

Think Together | *Student Leader*

Sept 2024-May 2025

- Tutored 20+ peers in Math and Science while coordinating meal distribution and managing event logistics for smooth operations.
- Assisted 13 students with college applications and contributed to program development, enhancing student engagement.