

Anant Patel

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EDUCATION

The Pennsylvania State University
College of Engineering
Bachelor of Science in Computational Data Science
Minor in Statistics

University Park, PA
Expected Graduation May 2028
GPA: 3.82/4.00
Dean's List (4/4) semesters

SKILLS, COURSEWORK & HONORS

Skills: Python, SQL, Java, CSS, HTML, R, Statistical Analysis, Data Visualization, Machine Learning, GitHub, Power BI, Tableau
Coursework: Data Structures & Algorithms, Programming Models for Big Data, DS through Statistical Reasoning and Computation
Honors: Google Analytics Certified (Jan 26'), CBSE Badminton Nationals (Dec 24'), Olympiad Distinction (Jan 24')

RELEVANT EXPERIENCE

Penn State Electrical Engineering Undergraduate Research Program
Undergraduate Researcher

University Park, PA
May 2026 – Present

- Developed Python-based machine learning pipelines using **Pandas, NumPy, Scikit-learn, TensorFlow/PyTorch**, and time-series analytics to preprocess high-frequency power system data, perform **feature engineering**, and build predictive models for stability assessment and oscillation forecasting.
- Engineered end-to-end **data processing, model training, hyperparameter optimization, cross-validation, and performance evaluation workflows**, implementing statistical learning, signal processing, and AI/ML algorithms to improve real-time monitoring and predictive analysis of modern power systems.

Penn State Alumni Association
Data Analyst Intern

University Park, PA
May 2026 – July 2026

- Performed **data wrangling, statistical analysis, audience segmentation, and visualization** on a **research dataset** containing insights from 1,022+ survey respondents, translating complex quantitative findings into executive reports, dashboards, and strategic recommendations for 8+ cross-functional departments.
- Built and deployed a production-ready analytics platform/website using **Next.js, React, TypeScript, Tailwind CSS, Vercel, and interactive charting libraries**, implementing responsive UI, reusable components, dynamic data visualization, and research navigation to improve accessibility and exploration of analytical findings.

PROJECTS

Micro Trading Algorithm
PSU Quant

University Park, PA
March 2026 – Present

- Built an AI driven quantitative trading platform in Python, leveraging **Pandas, NumPy, Scikit-learn, TensorFlow/PyTorch**, and **financial time-series analysis** to preprocess market data, train predictive models, and generate automated trading signals.
- Implemented a **scalable back testing and portfolio evaluation framework** featuring vectorized trade execution, risk management, and performance attribution, utilizing metrics such as Sharpe Ratio, Sortino Ratio, Maximum Drawdown, CAGR, volatility, and trade analytics for iterative strategy optimization.

Curio
UC Berkeley AI Hackathon

Berkeley, CA
June 2026

- Built a full-stack AI application using **Next.js, React, TypeScript, Python, and Pipecat**, integrating **Deepgram STT, Cartesia TTS, and OpenAI-compatible LLM APIs** to process real-time voice input and generate structured visual study notes.
- Architected a real-time multi-agent pipeline with **WebRTC, tldraw, Supabase (PostgreSQL), and Redis**, implementing tool-calling, recursive topic segmentation, and live sync to render flowcharts, mind maps, and diagrams from spoken explanations.

LEADERSHIP AND CAMPUS INVOLVEMENT

Indian Culture and Language Club (ICLC)
Vice-President of Finance
Co-THON Chair

University Park, PA
April 2026 – Present
May 2025 – April 2026

- Managed a \$25,000+ annual budget, overseeing **financial planning, budget forecasting, expense tracking, and fund allocation** across 4+ cultural events, ensuring compliance with university financial policies and efficient resource utilization.
- Lead **fundraising strategy, corporate sponsorship outreach, vendor negotiations, and financial reporting**, collaborating with executive board members and campus organizations to secure \$4200+ in funding and support student events annually.

Badminton Club at Penn State
Treasurer and Team Athlete

University Park, PA
December 2024 – Present

- Managed \$1100+ in **fundraising** and oversaw budget planning, financial reporting, expense management, and fund allocation to support equipment procurement, tournament participation, and team travel while ensuring efficient use of club resources.
- Competed in **intercollegiate tournaments**, achieving a Runner-Up finish, while collaborating with the executive board to plan large-scale events, coordinate logistics, and strengthen member engagement through effective **organizational leadership**.