

EXECUTIVE SUMMARY: Seeking early-career roles in Software Development and AI/ML, with experience developing applications in machine learning, quantitative finance, and web/mobile development. Experience designing full-stack systems, training LLMs, building high-accuracy ML pipelines, and leading cross-disciplinary engineering teams.

EDUCATION

The Pennsylvania State University
BS Computer Science Engineering | Minors: Engineering Entrepreneurship, Cybersecurity
Dean's List: All Semesters

University Park, PA
Graduation Date: May 2026
GPA: 3.83/4.00

EXPERIENCE

A.I.L.S (Attitude & Intelligence Learning Systems)
Software Developer Intern

Remote | Mumbai, India
Aug 2025 - Present

- Developed a form builder with visual workflow automation system featuring 15+ node types for data processing using react, python
- Implemented AI-powered report generation, RESTful APIs, secure authentication, with 3,900+ lines of backend code.
- Developed microservices architecture with webhook integrations, customer-specific report delivery, and containerized deployment.

Indian Oil Corporation

Machine Learning and Data Analytics Intern

Mumbai, India
Jun 2025 - Aug 2025

- Applied ML (RFM analysis and K-Means clustering) to segment 10,000+ customers enabling targeted loyalty campaigns.
- Flagged a high-churn customer segment and advised retention actions, safeguarding 8–10% of recurring fuel sales.
- Automated analytics with KPI dashboards and performance metrics, accelerating decisions across state sales team.

LEADERSHIP

Co-Founder / Vice-President at The Hyperloop Development Club at Penn State

Founded a 40+ member interdisciplinary team building a Hyperloop prototype; leading technical strategy, working on embedded systems.

Secretary at The Association for Computing Machinery, Penn State

Managed operations for a 2000+ member student chapter, organizing talks, competitions, and technical workshops.

PROJECT EXPERIENCE

Churn and Customer Lifetime Value Predictor Development

Mar 2025 - May 2025

- Developed a churn prediction model using RFM and XGBoost with 98% accuracy on 20,000+ records, enabling small-to-mid cap businesses to reduce churn by 27% and improve ROI via targeted campaigns.
- Deployed backend on Docker, created a custom website for clients to securely log in and view churn risk scores, retention insights, and customer lifetime value metrics.

ML-Based Equity Momentum Ranking System with Backtesting and Risk Analytics

May 2025 - July 2025

- Developed and backtested a LightGBM-based equity momentum strategy using 12+ indicators over 5 years of NSE-100 data.
- Evaluated model robustness using Sharpe ratio (2.06) and drawdown analysis to ensure risk-adjusted performance.

Handwriting and Tremor Analysis for Stress Detection using Machine Learning / Embedded Systems

Aug 2025 - Present

- Developing an on-device ML pipeline (XGBoost/TFLite) that fuses handwriting features from stylus (pressure, tilt, etc) with IMU tremor signals, enabling early stress and anxiety detection with baseline calibration, drift detection, and Hidden Markov smoothing.
- Building an app to process handwriting and tremor data in 10s intervals to generate stress trend reports (aim AUROC ≥ 0.80 initially)

Falcon-based Legal Q&A Assistant Development

May 2025 - Jun 2025

- Fine-tuned Falcon-1B LLM model using LoRA on 10K+ Indian legal Q&A pairs to build a low-latency assistant running under 2GB RAM for real-time legal queries.
- Integrated Retrieval-Augmented Generation (RAG) for improved legal context and accurate response recall.

Texting / Social Media App - Android App Development

May 2021 - Jul 2022

- Built a real-time messaging system on Android using Firebase Realtime Database, supporting concurrent users and consistent message synchronization across devices.
- Enhanced the app with secure authentication, structured data models, and persistent storage, ensuring scalability and maintainability for long-term use.

RELEVANT CERTIFICATIONS / SKILLS

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| • Wharton Online: Business Fundamentals Certificate | • Udemy: The Complete Android + Java Developer Course |
| • Google(Pursuing): Data Analytics Professional Certificate | • AWS (Pursuing): Cloud Practitioner + Solutions Architect |
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Languages / Frameworks: Python, Java, R, C++, C, SQL, PostgreSQL, HTML/CSS, Javascript, ReactJS, React Native, NodeJS, Git
Machine Learning / AI: Pandas, XGBoost, LightGBM, scikit-learn, NumPy, HuggingFace, LoRA, RAG, SHAP, matplotlib, PyTorch
Tools & Platforms: Jupyter, Docker, VSCODE, Android Studio, Figma, GitHub, Firebase, Apache Spark, Linux, Unix, Cursor, Co-Pilot
Concepts: DBMS, Big Data, LLM fine-tuning, MLOps, Deep Learning, App / Web Development, Prompt Engineering