Vibhasri Kandukuri

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EDUCATION

Purdue University — West Lafayette, IN
B.S. in Computer Science, Machine Learning Concentration, Minor in Finance — *Aug. 2023 – Dec. 2026*
- Certificate in Applications of Data Science
- Notable Coursework: Discrete Math, Linear Algebra, Analysis of Algorithms, Berkeley Artificial Intelligence Course

EXPERIENCE

- **Undergraduate TA Scrum Master** — *Aug 2025 - Dec 2025*
  Lincoln Financial Group, The Data Mine, Purdue University
  - Led an 11-member team to build logistic regression and decision tree models predicting annuity outcomes, improving interpretability of risk factors by 25%
  - Oversaw biweekly sprints, deliverables, and stakeholder reports, ensuring 100% on-time delivery through Agile practices

- **Team Lead and Software Engineering Researcher** — *Aug 2024 - May 2025*
  AgRPA, The Data Mine, Purdue University
  - Engineered an autonomous drone mapping and targeted pesticide-spraying system that reduced chemical use by 60% and operational costs by 30–70%.
  - Developed a Python tool to convert shapefiles into flight waypoints for QGroundControl, improving battery utilization by 20% and image resolution through optimized coverage.
  - Managed all cross-team and stakeholder communication, coordinating integration across AI, software, and mechanical subsystems.

- **Data Science Intern** — *May 2024 - Aug 2024*
  Vizzhy
  - Analyzed over 10,000 patient records using Pandas and NumPy to identify high-risk factors for diabetes onset.

- **Machine Learning and Data Science Researcher** — *Aug 2023 - May 2024*
  Caterpillar, The Data Mine, Purdue University
  - Built a Flutter mobile app for EV fleet managers to monitor and receive real-time notifications of battery health.
  - Applied ARIMA time series forecasting to predict state-of-charge trends, reducing charging downtime by 15% and improving fleet utilization.
  - Cleaned and structured over 50,000 telemetry data points to enhance prediction model reliability.

PROJECTS

- **Solar Energy Forecasting** — *Apr 2025*
  Forecasted energy output of solar panels based on weather patterns from NOAA/USGS datasets.

- **Shell Interpreter** — *Nov 2024*
  Built a C shell supporting subshell command evaluation, wildcard expansion, redirection, and piping

- **Simple C Compiler** — *Mar 2024*
  Developed a Simple C compiler using Lex and Yacc to parse a reduced C language and generate x86-64 assembly code

- **Personal Malloc in C** — *Jan 2025*
  Built a custom memory allocator in C leveraging freelists and system calls to manage dynamic memory safely and efficiently.

- **Android SQLite Java Bookstore** — *Apr 2023*
  Developed a mobile app in Android Studio with SQLite backend to manage book inventory, customer orders, and transaction history for 100+ records, supporting offline data persistence and search queries.

- **Java Marketplace** — *Nov 2023*
  Built a multithreaded Java client–server marketplace handling 20+ concurrent client sessions and 200+ simulated transactions using socket-based networking and persistent file storage

SKILLS

Languages/Frameworks: Python (Pandas, NumPy, Scikit-Learn), MCP, Java, C, R, Bash, Dart, HTML/CSS, React, SQLite, x86-64, QGroundControl
Tools: Git Version control, Agile, Kanban, Jupyter, LaTeX, Notion, Microsoft Suite

EXTRACURRICULARS

Treasurer — West Lafayette, IN
Google Developer Group (GDG), Purdue University — *Dec 2024 - Dec 2026*
- Managed funding, logistics, and workshops, including leading a Gemini API session that taught 100+ students to build AI/ML applications