

# Avinash Pandey

[aopandey@purdue.edu](mailto:aopandey@purdue.edu) | (317) 998-3501 | Indianapolis, IN 46204 | [avinashpandey.streamlit.app/](https://avinashpandey.streamlit.app/) | [github.com/Aopandey](https://github.com/Aopandey)

## Education

### Bachelor of Science in Computer Science

Anticipated Graduation: December 2024

Purdue University, IN

Minor: Mathematics

Cumulative GPA – 3.2

### Student & Professional Organization

- **Team Leader**, Boiler Gold Rush (BGR) April 2024 – August 2024
  - Facilitated the orientation of 800 new students to university life, promoting academic success and personal growth
- **Vice President**, Computer Science Club (CS Club) May 2023 – May 2024
  - Revitalized the CS Club after a 2-year hiatus, organized tech events, increased club engagement by 100%
  - Coordinated hackathons, attracted 200+ participants and secured sponsorships, increased club funding by 50%
- **Peer Mentor**, International Peer Mentoring Program (IPMP) May 2022 – May 2024
  - Mentored 50+ international students to achieve personal & academic goals fostering an inclusive environment

## Work Experience

### Machine Learning Engineering Intern

July 2024 – Present

#### Aider Ventures

Indianapolis, IN

- Develop automated data pipelines using FAISS embeddings and ChromaDB to summarize over 2,600 research papers from ICML 2024, optimizing data handling and ensuring accurate information extraction from scraped source icml.cc
- Engineer scalable pipelines leveraging Gemini API to process and classify over 10,000 research papers, improving the categorization process of datasets and increasing system efficiency by 40% through data processing techniques
- Implement metadata filtering algorithms in LangChain, improving precision of summarized research outputs by 20%
- Built an interactive dashboard for visualizing and analyzing key insights like the number of papers by university and top research areas, enabling non-technical professionals to get insightful trends across over 10,000 papers

### Business Analyst Intern – Office of Technology Services

December 2023 – March 2024

#### Legislative Services Agency

Indianapolis, IN

- Collaborated with software developers to support & troubleshoot internal software, achieving a 95% resolution rate
- Executed data verification processes for the Indiana General Assembly, ensuring 98% accuracy through data analytics
- Facilitated strategic interactions and technical support with Indiana lawmakers and Legislative Services Agency staff, optimizing business processes through the development of tailored applications and tools problem resolution

## Projects

### Mutual Learning Algorithm for News Classification (Senior Capstone Project)

August 2024 – Present

- Implement a mutual learning framework that improves Naïve Bayes accuracy by 14% and SVM by 5% in classifying the BBC news dataset. Develop a text preprocessing pipeline, reducing noise by 20% and boosting precision by 15%. Achieve 96.83% accuracy with a non-linear SVM on 2,225 news articles, across 5 categories

### Personal Financial Tracker (Java)

July 2024

- Developed 'Money Buddy,' an OOP-based CLI application for managing income, expenses, and savings goals, featuring persistent data handling with serialization and CSV report generation for financial analysis

### Weather Station Data Hub (Python)

March 2024

- Developed a Flask and Pandas-powered web service delivering precise weather data, station information, and year-filtered analytics through a streamlined API interface, ensuring real-time updates and 99% uptime

### Counts of Bushels Project (SQL)

October 2023

- Architected a 5NF database for Indiana's corn and soybean yields, utilizing SQL for relational database implementation, improving data retrieval efficiency by 40%, and authored a comprehensive technical report detailing the database

## Technical Skills

- **Languages:** Python, SQL, R/R-Studio, Java, C++, C, JavaScript, CSS
- **Framework and Libraries:** Gemini API, Pandas, PyTorch, TensorFlow, LangChain, Haystack, ZenML, Tableau, PowerBI, Flask, Django, PyPDF2, Fitz, AWS, Microsoft Azure, React, Redux, Express, PySimpleGUI, Paperetl, GROBID, Docker
- **Database Management:** Git, GitHub, MySQL, Microsoft SQL Server, , Dagster, MongoDB, Azure Data Studio