

Avinash Pandey

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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 critical 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

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, GitHub, AWS, Microsoft Azure, React, Redux, Express, PySimpleGUI, Paperetl, GROBID
- **Database Management:** MySQL, Microsoft SQL Server, Docker, Dagster, MongoDB, Azure Data Studio