

# Avinash Pandey

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## Education

### Bachelor of Science in Computer Science

Purdue University, IN

Minor: Mathematics

Cumulative GPA – 3.2

Anticipated Graduation: December 2024

## Work Experience

### Machine Learning Engineering Intern

July 2024 – Present

#### Aider Ventures

Indianapolis, IN

- Develop automated pipelines using Haystack to fetch and summarize trending research papers, processing and summarizing over 500 papers, ensuring efficient data handling and information retrieval from paperswithcode.com
- Engineer scalable data pipelines leveraging ZenML and Prefect Python to analyze and classify over 10,000 research papers, enhancing the categorization process of AI and LLM datasets
- Implement metadata filtering algorithms in LangChain, improving the precision of summarized research outputs by 20%
- Focus on building scalable, DAG-based pipelines, employing advanced techniques to manage and process large datasets, reducing processing time by 40%, improving the efficiency of data workflows, and enabling rapid data analysis and decision-making
- Deploy a Streamlit-based application showcasing the developed application enhancing user engagement and accessibility

### 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% issue resolution rate
- Executed advanced data verification and timeliness assurance processes for the Indiana General Assembly, leveraging data analytics and quality control methodologies to maintain unparalleled data fidelity and promptness with a 98% accuracy rate
- Facilitated strategic interactions and technical support with Indiana lawmakers and Legislative Services Agency staff, optimizing business processes through problem resolution and the development of tailored applications and tools

## Projects

### Weather Station Data Hub (Python)

April 2023

- Developed a robust Flask and Pandas-powered web service for agile weather data delivery, offering precise temperature insights, comprehensive station data, and year-filtered analytics through a streamlined web API interface, successfully handled data for over 50 weather stations, and ensured real-time updates with a 99% uptime, enhancing data accessibility and user experience

### Counts of Bushels Project (SQL)

October 2023

- Architected a normalized 5NF database with Logical Data Model (LDM) and Physical Data Model (PDM) for Indiana's corn and soybean yields, utilizing SQL for relational database implementation, which enhanced data retrieval efficiency by 40%. Additionally, I crafted a comprehensive technical report detailing the database design and implementation strategy

### Workout Planner App (Python)

January 2024

- Implemented a Workout Planner in Python featuring multi-interface (CLI, GUI via PySimpleGUI, Web via Streamlit) architecture, advanced file I/O for persistent data storage, and cross-platform support to optimize user interaction

## Technical Skills

- Languages:** Python, C, C++, Java, JavaScript, CSS, R/R-Studio, SQL
- Framework and Libraries:** LangChain, Haystack, ZenML, Prefect, React, Redux, Express, Django, Flask, PySimpleGUI, Pandas, Papertr, GROBID, PyTorch, TensorFlow, GitHub, AWS, Microsoft Azure, PyCharm, Jupyter
- Database Management:** MySQL, MongoDB, Microsoft SQL Server, Azure Data Studio

## Student & Professional Organization

### Vice President, Computer Science Club (CS Club)

May 2023 – May 2024

- Revitalized the CS Club after a 2-year hiatus, led a team in organizing tech events, increasing club engagement by 100%
- Coordinated hackathons, attracted 200+ participants and secured industry sponsorships, increased club funding by 50%

### Team Leader, Boiler Gold Rush (BGR)

April 2024 – Present

- Facilitate the orientation of 800 new students to university life, promoting academic success and personal growth.

### Peer Mentor, International Peer Mentoring Program (IPMP)

May 2022 – May 2024

- Mentored over 50 international students to achieve personal & academic goals by fostering a diverse and inclusive environment