Kanishka Chandrakar

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OBJECTIVE

Detail-oriented Computer Science senior at Pennsylvania State University with a Mathematics minor, passionate about software development and data analysis. Skilled in collaborative coding, problem-solving, and eager to apply technical expertise to innovative projects in a dynamic environment.

EDUCATION

Pennsylvania State University — Pennsylvania, USA
Bachelor of Science in Computer Science, Minor in Mathematics — *Aug. 2021 – Dec. 2024*

GPA: 3.4/4.0
Dean's List – Fall 2023, Spring 2024

WORK EXPERIENCE

Undergraduate Learning Assistant — CMPSC 221, MATH 220 — May. 2022 – Present
Pennsylvania State University — *Pennsylvania, USA*

- Assessed and analyzed over 200 code submissions and mathematical problems, delivering targeted feedback and solutions that contributed to a 30% increase in student pass rates.
- Provided tailored academic assistance during office hours, fostering a supportive learning environment that significantly improved individual student performance and understanding of course material.

Software Engineering Intern — Reliance Jio Platforms Ltd. — June 2024 – Aug. 2024
India's largest Telecommunications Industry — *Mumbai, India*

- Developed the "LOS Administration portal" features using XCode while ensuring data security, resulting in successfully delivering a secure and functional IOS app, used by employees for day-to-day-business.
- Integrated essential SDKs to establish the foundational framework for "Jio Maps", ensuring compatibility and optimal performance, thus laying a robust groundwork for further development

Academic Facilitator- Women in Engineering — Jan. 2023 – May 2023
Pennsylvania State University — *Pennsylvania, USA*

- Developed and introduced individualized learning plans for student success, causing an increase in course completion rate.
- Facilitated group review sessions and monitored student participation, thus enhancing overall participation rates.

RESEARCH EXPERIENCE

Undergraduate Research Assistant — LLMs and NLPs — Feb. 2024 – Present
Pennsylvania State University — *Pennsylvania, USA*

- Assisting faculty members in conducting research projects on optimizing large language models (LLMs) for text classification, and sentiment analysis, thus improving model accuracy by 20%.
- Analyzed large datasets to enhance machine learning pipelines; presented findings at meetings, and utilized Git for model deployment, leading to better research outcomes.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, R, SQL, HTML/CSS, JavaScript, Verilog, MATLAB, Swift/SwiftUI
Developer Tools: Git, Google Collab, VS Code, Visual Studio, IDLE, Unix, Xcode, Linux, Shell Scripting

COURSES

- Operating Systems
- Machine Learning
- System Programming
- Digital Design
- Artificial Intelligence
- OOP with Web
- Data Structures and Algorithms
- Game Theory
- Linear Optimization
- Computer Organization & Design

Personal Projects

GUESS WHAT? - Multiplayer Doodle Game | *SwiftUI, PencilKit, GameKit*   Aug. 2024 – Present
- Developing a multiplayer drawing game, using SwiftUI, GameKit, and PencilKit, with real-time matchmaking through Apple's Game Center, allowing users to draw in-game using Apple Pencil.
- Implementing seamless data exchange, network event handling, and custom assets for an engaging, interactive user experience.

DoNow - To Do List App | *SwiftUI, Firebase*   May. 2024 – Present
- Developing a To-Do List app using SwiftUI and CoreData for persistent task management, allowing users to add, edit, and organize tasks by priority.
- Implementing Firebase for user authentication and creating a user-specific database, enabling secure login, task synchronization across devices, and personalized task management.

Kings and Pigs - Action Platformer Game | *JavaScript, HTML, CSS*   Jan. 2024 – April 2024
- Designed organized databases that administrators could efficiently manage and update while providing students with seamless access to essential academic information.
- Maintained a user-friendly interface for faster registration rates, extra courses, and better academic planning.

Stock Prediction Website | *JavaScript, Flask, JupyterNotebook*   Oct. 2023 – Dec. 2023
- Utilized Python and machine learning algorithms (e.g., ARIMA, LSTM) to forecast stock prices based on historical data and technical indicators, enhancing predictive accuracy for investors.
- Implemented a user-friendly interface, featuring interactive data visualizations and real-time stock analysis tools, enabling users to input stock symbols, view historical trends, and receive actionable insights.

AI Chatbot | *Django, Python*   May 2023 – Sept. 2023
- Built an interactive chatbot application using Django and Python, and incorporating natural language processing (NLP) techniques, thus providing users with accurate and context-aware responses.
- Designed a scalable backend system with Django REST Framework for seamless integration with various messaging platforms, enabling real-time conversations and personalized interactions.

Spam Email Identifier | *JupyterNotebook, Python, Streamlit*   Aug. 2022 – Dec. 2022
- Developed an email spam detection system using machine learning algorithms (e.g., Naive Bayes, Support Vector Machines) to classify messages as spam or non-spam, achieving high accuracy of message filtering.
- Implemented a data preprocessing pipeline involving text normalization and feature extraction techniques (e.g., TF-IDF, word embeddings) to enhance model performance.

Course Projects

5 Stage 32-Bit MIPS Pipelined CPU | *Xilinx Vivado, MIPS*   Jan. 2023 – May 2023
- Leveraged advanced computer architecture concepts to implement a 5-stage MIPS Pipelined CPU, resulting in a 40% reduction in average instruction execution time.
- Implemented 5-stage pipelining architecture consisting of *Fetch, Decode, Execute, Memory and Write-back* stages.

MDADM Utility File Management System | *Linux, C, Git, UTM*   Jan. 2023 – May 2023
- Introduced cache mechanism to a comprehensive file management system that significantly improved disk efficiency by 90%, and optimized and enhanced the system-level performance.
- Integrated TCP and UDP communication protocols, resulting in 30% faster file transfers and reduced downtime.

Course Scheduler System | *Java, Apache Derby, NetBeans*   Aug. 2022 – Dec. 2022
- Designed organized databases that administrators could efficiently manage and update while providing students with seamless access to essential academic information.
- Maintained a user-friendly interface for faster registration rates, extra courses, and better academic planning.

2D Painting Tool | *Java GUI, Apache Derby, NetBeans*   Aug. 2022 – Dec. 2022
- Created an intuitive user interface that allowed users to easily load, manipulate, and draw 2D images and designs.
- Expanded advanced image manipulation features by 15% by applying adjusting color properties.

Personal Website

To get to know more about me, please visit:
- https://kanishkachandrakar.github.io/kaniportfolio/