

Kanishka Chandrakar

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EDUCATION

Pennsylvania State University

Bachelor of Science in Computer Science, Minor in Mathematics

GPA: 3.4/4.0

Dean's List

State College, PA

Aug. 2021 – Dec. 2024

Fall 2023

EXPERIENCE

Undergraduate Research Assistant

Pennsylvania State University

Feb. 2024 – Present

State College, PA

- Assisting faculty members in conducting research projects by collecting and organizing data, contributing to the analysis process, and preparing research materials.
- Conducting literature reviews to support ongoing research initiatives, synthesizing relevant information to inform project development and enhance scholarly understanding.

Mathematics Learning Assistant

Pennsylvania State University

Aug. 2023 – Dec. 2023

State College, PA

- Coordinating with instructors for enhanced in-class support, resulting in a 30% rise in participation and improved attendance.
- Delivering personalized academic support during office hours and guiding students, leading to improved assignment grades and overall course performance.

Computer Science Learning Assistant

Pennsylvania State University

May 2022 – Dec. 2023

State College, PA

- Coached Programming and Computing in Python to over 100 undergraduate students.
- Evaluated 200+ codes, provided solutions, and conducted exam preparation sessions and graded exams.

Academic Facilitator- Women in Engineering

Pennsylvania State University

Jan. 2023 – May 2023

State College, PA

- Developing and introducing individualized learning plans for student success, causing an increase in course completion rate.
- Facilitating group review sessions and monitoring student participation, thus enhancing overall participation rates.

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.

TECHNICAL SKILLS

Languages: Java, Python, C, C++, R, SQL, HTML/CSS, JavaScript, System Verilog, MATLAB, Linux, Shell Scripting

Developer Tools: Git, Google Collab, VS Code, Visual Studio, IDLE, Unix

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