Pem Tsering Gurung

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Education

The College of Wooster **Expected Graduation:** May 2026

*Bachelor of Arts in Computer Science (**GPA:** 4.00/4.00)* *Wooster, Ohio*

- **Relevant Coursework:** Data Structures & Algorithms, User Interface Design, Software Engineering, Programming Languages, Algorithm Analysis, Theory of Computation, Operating Systems, Discrete Math, Calculus.

Experience

Schneider Electric May 2025 - July 2025

Software Engineer Intern *Remote*

- Automated 95% of AI agent tasks by building an intelligent Model Context Protocol (MCP) client that uses a Large Language Model (LLM) to dynamically execute workflows via the Kubernetes-hosted backend.
- Developed and deployed a scalable MCP server backend on AWS EKS using FastAPI, Docker, and Kubernetes.
- Engineered an Agentic AI co-pilot using Python, LLMs, and LlamaIndex to translate natural language into SQL queries, reducing client data retrieval time by 25%.
- Accelerated query execution by 30% by designing a delegated, multi-agent Python workflow to optimize SQL logic.

The College of Wooster October 2023 - September 2024

Digital Archive Research Intern *Wooster, Ohio*

- Led full-stack development for the Anglophone Chile archive with Django, React, PostgreSQL, and Bootstrap stack.
- Increased user engagement by 30% by designing an automated email notification system using Django, Celery, and Redis, successfully delivering over 500 personalized notifications monthly.
- Cut API response times by 40% by re-architecting the site with React and Django REST Framework.
- Reduced page load time by 15% and cut mobile bounce rates by 20% by implementing 20+ front-end optimizations with React and CSS.

The College of Wooster January 2024 - May 2024

Mathematics and Computational Science Research Intern *Wooster, Ohio*

- Accelerated experimental analysis by 20% by developing TensorFlow deep learning models that improved pattern identification accuracy by 12% across 5,000+ samples.
- Increased predictive accuracy of experimental outcomes by 10% across 20 scenarios by building agent-based simulations with Mesa, PyTorch, and MLflow.
- Engineered a Scikit-Learn & Matplotlib data pipeline, boosting bacterial analysis accuracy by 15%.
- Reduced data preparation time by 40% by automating data cleaning and integration workflows with Pandas.

Projects

Wooster Independent Study (I.S.) Oral Defense Scheduler | *Next.js*, *Supabase*, *PostgreSQL* Live Site | GitHub

- Developed and deployed a full-stack scheduling platform adopted by 3 departments, automating the complex oral defense scheduling process for over 80 students and 15 professors.
- Secured the application with role-based access control (RBAC) and distinct user views using Supabase Auth.

Rate Lowry | *Next.js*, *MongoDB*, *Tailwind CSS*, *Cloudinary* Live Site | GitHub

- Engineered a full-stack review platform with a Next.js RESTful API, slashing MongoDB query times by 24% (29ms to 22ms) and sort operations by 23% (28ms to 22ms) through implementing compound indexes.
- Integrated the Cloudinary API for image uploads and CDN delivery, cutting image load times by 70%.

Los Angeles Fire Rescue Resource Allocator | *React.js*, *Leaflet.js*, *JavaScript* Live Site | GitHub

- Secured 2nd Place (Developer Track) at WooHackathon by engineering an optimization tool that cut simulated emergency response times by 30% using a JavaScript genetic algorithm.
- Developed and deployed an interactive map UI with React and Leaflet.js to visualize the algorithm's optimal routes.

Technical Skills

Languages: Python, JavaScript, TypeScript, Java, C++, Kotlin, HTML/CSS, SQL.
Frameworks & Libraries: React.js, Next.js, Node.js, Django, Flask, PyTorch, TensorFlow, LlamaIndex, LangGraph.
Cloud & DevOps: AWS (EC2, S3, EKS), Docker, Kubernetes, Google Cloud Platform (GCP), Firebase, Supabase.
Databases & Tools: PostgreSQL, MongoDB, Git, GitHub.