

SHISTATA SUBEDI

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Ph.D. student in Computer Science at the University of Oregon with a developing focus on **Artificial Intelligence (AI), Machine Learning (ML), and Explainable AI (XAI) applied to Networks and Trustworthy Systems**. Actively learning and exploring advanced techniques for creating interpretable, reliable ML solutions for high-stakes domains such as network security and large-scale distributed systems. Motivated to contribute to innovative research bridging AI and practical applications in network performance and safety.

EDUCATION

Ph.D. in Computer Science

University of Oregon, Eugene, OR

Sep 2024 – Present

BTech in Computer Science and Engineering

Vellore Institute of Technology, Tamil Nadu, India

Awarded Highest Academic Scholarship

May 2019 – Apr 2023

PROFESSIONAL AND RESEARCH EXPERIENCE

Graduate Research Work

University of Oregon, Eugene, OR

Sep 2024 – Present

- Explored Hybrid Explainability in ML Models: Conducted research on global and local explainability techniques, emphasizing their application to real-world network security and performance problems.
- Investigated Trust and Usability in ML for Networks (ML4Nets): Studied state-of-the-art techniques to enhance operator trust in ML systems through interpretable decision-making frameworks.
- Analyzed Distributed ML Challenges: Reviewed scalability, efficiency, and latency issues in explainability models for large-scale networks and distributed systems.
- Literature Review: Focused on foundational work in networked systems, such as Bootstrapping Trust in ML4Nets Solutions and ARISE Framework for Network Measurements.

Teaching Assistant

University of Oregon, Eugene, OR

Sep 2024 – Present

- Guided students in foundational web development, covering HTML, CSS, and JavaScript, focusing on analytical thinking and practical applications.
- Supervised lab sessions, evaluated assignments, and provided personalized feedback, fostering improved comprehension and coding skills.
- Conducted lectures and hands-on labs in web programming and debugging, enhancing students' technical confidence and problem-solving abilities.
- Engaged students in critical thinking, preparing them for more advanced research in computer science

Software Engineer

Leapfrog Technology Inc., Kathmandu, Nepal

Apr 2023 – June 2024

- Streamlined the software development lifecycle, reducing project timelines by 20%.
- Optimized RESTful APIs, achieving 30% faster response times, and enhancing user satisfaction and engagement.
- Designed and implemented backend APIs for the application using Micronaut.
- Expanded product functionality to meet evolving business requirements.
- Led high-quality data annotation, reducing anomalies and boosting model performance.

TECHNICAL SKILLS

- **Research Methods:** User Studies, Data Analysis
- **Programming/Scripting Languages:** Python, Java, JavaScript, TypeScript, HTML5, CSS
- **Frontend Frameworks:** React.js, Redux, SASS, Polymer.js, LIT Element
- **AI/ML Tools:** Explainable AI, Decision Trees, Neural Networks, LLMs

- **Networking:** Distributed Systems, Edge Computing, Network Optimization
- **Data Analysis:** SQL, Data Visualization, Statistical Modeling
- **Mathematical & Computational Tools:** MATLAB, LaTeX
- **Backend Technologies:** Node.js, Express.js
- **Databases:** MySQL, MongoDB
- **Tools & Version Control:** Git, GitHub, Postman
- **Project Management & Methodologies:** Agile (Scrum, Kanban)

PROJECTS

- **Aspen Biosciences** — 2023
Worked on a comprehensive drug discovery management system for scientists, aimed at optimizing research and experiment management. Integrated project management, chemistry workflows, and inventory tracking to streamline the discovery pipeline. Utilized data-driven analysis to enhance functionality, contributing to a more efficient scientific research process.
- **Vyaguta ERP System** — 2023
Led a project to optimize employee and project management within an ERP dashboard. Conducted database optimization using SQL, resulting in a high-performance system that improved productivity and operational efficiency across multiple workflows.
- **VIT Connects** — 2021
Designed a cross-platform app using Flutter and Firebase to facilitate interaction, course collaboration, and task management for students and faculty at VIT. Emphasized HCI principles through user personas and usability testing, enhancing engagement and user experience.
- **Time Delivery Problem** — 2020
Created a route optimization algorithm for the Traveling Salesman Problem, achieving significant improvements in logistics efficiency. Focused on optimizing route planning within delivery systems, leveraging complex algorithms to reduce operational costs. — [CODE](#)

ACHIEVEMENTS

- **Full Ride Scholarship** — COMPEX Scheme of Indian Embassy, Vellore Institute of Technology
- **Competitive Programming:** Solved 160+ problems on Leetcode
- **Leadership:** Vice President at 5th Pillar NGO; led outreach programs introducing underprivileged communities to technology.