Bikash Thapa

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EDUCATION

Doctor of Philosophy, Computer Science
Master of Science, Computer Science
Old Dominion University (Norfolk, VA)   Aug. 2025 - Present

Bachelor in Engineering, Computer Engineering
Pulchowk Campus, Tribhuvan University
(Lalitpur, Nepal)   Nov. 2017 - Apr. 2022

HONORS AND AWARDS

Best Undergraduate Project Award, by Rara Labs
Received a prize of NPR 40000(2022)

First runner up
LogPoint CTF (2021)

Campus Finalist
Hult Prize (2019)

Full Scholarship
Bachelor of Engineering funded by the Government of Nepal (2017)

TEACHING EXPERIENCE

Old Dominion University
Graduate Teaching Assistant for Cybersecurity Fundamentals (Aug. 2025 - Dec. 2025)

Private Academic Tutor
Tutored undergraduate-level mathematics course (2021)

Orbit Medical Entrance Preparation
Mathematics Instructor for the BSc Agriculture Entrance Exam (2018)

WORK EXPERIENCE

Graduate Research Assistant   Aug. 2025 - Present
Old Dominion University (Norfolk, VA), Department of Computer Science
- Conduct research in areas of applied cryptography and data privacy including fully homomorphic encryption and trusted hardware.

Graduate Teaching Assistant   Aug. 2025 - Dec 2025
Old Dominion University (Norfolk, VA), Department of Computer Science
- Hold office hours, grade assignments, and evaluate examinations.
- Courses include CS 462/562 (Cybersecurity Fundamentals)

Solutions Engineer   February 2022 - July 2025
LogPoint (Lalitpur, Nepal)
- Software Troubleshooting: Identified and addressed some irregularities in the SIEM software. Debugged issues in a Production environment (Python, Java). Developed and deployed hotfixes when necessary

- *Linux Administration: Debugged and Resolved issues related to OS, System, Networking and Application layers of SIEM in customer production environment. Worked on root cause analysis of issues related to system performance, and tuned production LogPoint environment*
- *SaaS Operations: Integrated open-source solutions like Prometheus and Grafana in monitoring pipeline of SaaS applications*
- *Internal Toolings Development: Automated server administration and monitoring by building internal tools using Bash and Python. Proved to be helpful for personal and departmental use.*

Blockchain Intern   *Aug. 2021 - Dec. 2021*
Sireto Technology *(Lalitpur, Nepal)*
- *Created smart contracts in Haskell within the Plutus framework, specifically designed for the Cardano ecosystem.*
- *Enhanced software development capabilities by acquiring proficiency in new tools and techniques essential for project completion.*

COURSEWORK AND SKILLS

Computer Science: Computer Networks and Security, Cryptography, Operating Systems, Cloud Computing, Computer Architecture/Organization, Advanced Algorithms, Data Structures and Algorithms, Database Management Systems, Theory of Computation

Mathematics: Discrete Mathematics, Linear Algebra, Calculus I-III, Differential Equations

Languages and Tools: C++, C, Python, JavaScript, Git, Linux, GDB, LATEX, Docker, Databases-MongoDB, PostgreSQL

DEVELOPMENT EXPERIENCE

Bifrost, Server Monitoring Tool (2023)
- *Built a server monitoring and alerting setup web application, comprising Grafana and Prometheus*
- *Updated the database structure and implemented REST APIs for better performance*
- ***Python, MongoDB, Typescript, Docker, Nginx, Linux***

Digital Id Management System Using Blockchain Technology (2022)
- *Developed a web3 application that employed Blockchain Technology to provide digital identity to the users as opposed to paper-based identity.*
- *Users could choose the information they prefer to keep private and the particular information they would like to share*
- *Implementation allowed self-sovereign identity, which is inherently unalterable and more secure than traditional identity systems*
- ***Solidity, IPFS, Firestore, React, Web3***

Crowdfunding Using Ethereum Smart Contract (2021)
- *Web3 application which uses Ethereum smart contracts for crowdfunding a project in the internet.*
- *Smart contracts automated the distribution of funds based on predefined conditions, providing increased security and transparency.*
- ***Solidity, Javascript***

Contact Tracing Application (2021)

- *Digitized the manual tracing system with aim in assisting the health officials trace the infected person suffering from communicable disease*

- *Used Bluetooth technology to trace proximity in mobile devices, and alert the users when they are near to any other registered infected users*

- ***Firebase, Firestore, Flutter***

EXTRA-CURRICULAR ACTIVITIES

Pulchowk Campus, Tribhuvan University (Lalitpur, Nepal)
Event Organizer, AI and Data Science Competition, Locus(2022)