Ke Li

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EDUCATION

University of Toronto   Toronto, ON
Master of Engineering in Computer Engineering & Identity, Privacy and Security (IPS) Jan. 2024 – Dec 2025
- Coursework: Computer Security, Cloud Computing, Deep Learning & Neural Network
- GPA: 4.0/4.0

University of Alberta   Edmonton, AB
Bachelor of Science in Computer Science   *Sep. 2019 – Aug 2023*
- Coursework: Operating System, Computer Networks, Computer Architecture, Web Development, Mobile App Development, Database Management, Machine Learning, Agile Methodology
- Awards: *Dean's Honor Roll (22-23)*

EXPERIENCE

Student Developer   Jan. 2023 – Apr. 2023
University of Alberta ALT Lab   *Edmonton, AB*
- Developed a website that generates interactive word graphs based on Cree words and their domains using React, D3.js and Docker.
- Optimize graph load times from 10 to 0.5 seconds by implementing the lazy loading time design pattern.
- Reviewed 50+ PR and contributed 4K+ lines of code to the codebase via Git.
- Maintained web application documentation using MkDocs.
- Used Jest for unit testing and Cypress for functional testing.

Back-End Engineer Intern   May 2021 – Aug 2021
Nandou Six Star System integration Co., LTD   *Wuhan, China*
- Wrote backend code that handled external HTTP requests from third party endpoints.
- Commended for clear communication and strong willingness to learn.
- Gained experience in Gunicorn, Nginx, SQLite and Django REST framework.

PROJECTS

Computer Security CTF Blog   Jan. 2024 – Apr. 2024
- Network Vulnerability: | DNS Poisoning | XSS Attack | CSRF Attack | SQL Injection |
- Binary Exploitation: | Buffer Overflow | Format String Attack | Double free Attack | ROP |

SDN Performance Simulator Website   Mar. 2024 – Apr. 2024
- Developed a web-based tool that allows users to create custom SDN network topologies and analyze the performance of their simulated networks.
- Implemented (CI/CD) pipelines to streamline the development process, enable efficient code deployment.
- Enhanced security of data fetching by integrating AWS Lambda and API Gateway, ensuring secure HTTPS connections for back-end server communications.
- **Utilized**: Python, JS, React, Django, Mininet, AWS EC2

Social Distribution Github   Sep. 2022 – Dec. 2022
- Developed a full-stack web app. 6-member team. Enabled user engagement features such as post sharing, commenting, liking, and following users.
- **Utilized**: Python, JS, React, Django, PostgreSQL, Docker

Distributed Server Simulation Github   Nov. 2022 – Dec. 2022
- Developed a multi-clients & server interaction simulation using C and socket API. Enabling the server to process and respond to multiple clients requests concurrently.

Shell CLI Github   Sep. 2022 – Oct. 2022
- Developed a command-line interface using C. Implementing functionalities such as process inspection, creation, termination and resume.

TECHNICAL SKILLS

Languages: C/C++, Python, Java, SQL (Postgres), JavaScript, HTML/CSS
Frameworks: React, Django, Cypress, Jest, Material-UI, Ant-Design
Developer Tools: Git, Docker, Kubernetes, Google Cloud Platform, AWS
Libraries: pandas, NumPy, Matplotlib, D3.js, ReactFlow, Mininet