PARAS SAXENA

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Portfolio · https://paras-saxena-fullstack.netlify.app/

OBJECTIVE

Computer science graduate with a strong passion for security and privacy. Experienced in development and secure coding with over 3 years of work experience in various IT projects seeking full-time opportunities.

EDUCATIONAL QUALIFICATION

Carnegie Mellon University — Pittsburgh, PA — Master's in Information Security — Jan 2023 - May 2024

Major Computer Science

Courses Taken **Secure Coding**: Code analysis/ security reviews, secure coding practices, building a secure file system, **Hacking101**: Micro corruptions, AFL, CVE's replications and analysis **Introduction to Information Security**: Cryptography, Access Control, Vulnerabilities, Policy, Privacy, Management **Applied Information Assurance**: Defense-in-Depth, Foundations, Threats, Host Security, Network Security, Network Monitoring, Cryptosystems, Encryption, Incident Response, Digital Forensics, Security Protocol. **Cyber Risk modeling**: legal compliance, threat modeling, MITRE ATTACK, the Common Vulnerabilities and Exposures database, and popular risk frameworks (STRIDE, PASTA, NIST, Vulnerability Assessment, etc.) **Fundamentals of Telecommunication, Introduction to Computer Systems (15513), Browser Security*, Distributed Systems*, Cloud Security*, Ethical Penetration Testing***, **Negotiations** * .

Jaypee University of Engineering and Technology — MP, India — Bachelor of Technology in Computer Science and Engineering — June 2016 - June 2020

Major: Computer Science

WORK EXPERIENCE

Carnegie Mellon University — Research Associate — Pittsburgh, USA — June 2023 - Present

- Developed a web application for combining public and shuttle transit systems.
- Designed to cater to the unique requirements of senior citizens, enhancing their mobility, Prioritized data security and privacy through strong protective measures.
- Incorporated user-friendly features for improved accessibility and ensured secure deployment for a reliable experience.

Carnegie Mellon University — Teaching Assistant (Introduction to information security) — Pittsburgh, USA — June 2023 - December 2023

- Setup of Lab(Ctf) server, executed recitation for homework, teaching, conducted Office hours to help solve doubts. responsible to mentor 13 students.
- Collaborated with TAs to invent new homework

Cognizant Technology Solutions India Pvt. Ltd. — Associate (Developer) — Pune, India — August 2020 - December 2022

- Successfully developed and maintained a secure customer-facing pharma platform with robust cybersecurity measures and a data privacy focus, reducing possible threat vector on the platform, performed code reviews.
- Led a team of 4 developers in transforming a legacy web application to a new framework with enhanced security and functionality within time constraints.
- Developed automated secure deployments scripts using GitLab and integrated security tools for data protection, reducing deployment time by 70% further reducing the cost.

PROJECTS

RAMP — *(July 2023 – Present)* —Developed a web-based transit system integration application (ReactJS, Django, PostgreSQL) focused on improving mobility for senior citizens. This project combined public and shuttle transit options, emphasizing data security, privacy, and user-friendly accessibility features. Ensured secure deployment for a reliable user experience.

Distributed File System — *(March 2024 – April 2024)* — Created a Distributed File System from scratch in Go , name and storage server implementation with support to RESTFULL API. Concurrency, Replication, Fault Tolerance

Raft Consensus Algorithm — *(March 2024 – March 2024)* —I developed a Raft consensus algorithm in Go, focusing on essential distributed computing functions like leader election, log replication, and system monitoring. Leveraging Go's concurrency features, I ensured fault tolerance and efficient peer communication in the network. This project honed my skills in implementing complex distributed systems and deepened my understanding of consensus algorithms and system resilience.

Buildit Breakit — *(September 2023 – December 2023)* — Created a secure file system from scratch and broke other team file systems.

Malloc Implementation — *(September 2023 - December 2023)* — from scratch implicit to explicit to segmentation to optimization via (footer less and mini blocks)

Vidly — Front End based on Reacts , application was a clone of Netflix with features such as (Sales) , (Recommendation System) , (User rating system) and backend is based on AngularJS

For rest project please checkout my portfolio website

TECHNICAL SKILLS

Programming Languages: C, Go, C++, Python 3, HTML, CSS, JavaScript, Apex, Aura **Frameworks/Libraries:** React.JS, Bootstrap, LWC, Django.

SKILLS

Development/Deployment: JavaScript, HTML5, CSS3, React, Angular, Vue.js, Node.js, Express.js, MongoDB, SQL, PostgreSQL, MySQL, RESTful APIs, GraphQL, Git, GitHub, Docker, Kubernetes, AWS, Azure, Google Cloud Platform, Agile methodologies, Scrum, Test-Driven Development, Continuous Integration, Continuous Deployment, TypeScript, Sass, LESS, Responsive Web Design, Microservices architecture, Security practices (OAuth, JWT), Performance Optimization, Cross-Browser Development, Debugging