Vighanesh Sharma

Master's of Science in Computers Science (MSCS)
B.Tech. in Computer Science and Engineering (CSE)

Email: vxs240002@utdallas.edu
Alt Email: vighaneshsharma@gmail.com
Contact No.: +91-9796466366

EDUCATION

- **University of Texas** *Dallas, Texas. August 2024 - present*
  Master's of Science in Computer Science (MS CS)
- **Indian Institute of Technology (IIT)** *Ropar. 2017-2021*
  Bachelor's of Technology in Computer Science and Engineering (B.Tech CSE)

SKILLS

- **Languages** : Python, Golang, C/C++, JavaScript, HTML, Intel x86-64, Java
- **Software/Frameworks** : Kubernetes, Docker, Linux, Git, Grafana, Prometheus, Loki, Guacamole, BDD, Cucumber, REST, PostgreSQL, NoSQL, Flask, React

WORK EXPERIENCE

- **GE (General Electric) HealthCare** *July 2021 - July 2024*
  Software Engineer (Edison HealthLink PaaS)
  - Designed, built and enhanced **PaaS components** for EHL, a **platform** used to run applications in a high-availability cluster in the hospital environment.
  - Improved Connectivity Service **(Python/Flask Back-end)** used to connect remotely to machines in the infrastructure by **automating connections** to the VMs and enabling connection through **SSH Keys**. This reduced connection time to VMs and saved **1 hour of a Service Engineer's time**, thus reducing overall **servicing time by around 15%** and significantly enhanced the security.
  - Maintained and improved Flair component, comprising a **REST API** and an **AWS lambda** service written in **Go**; by **automating BDD tests** in **Gitlab Pipeline**, saving **20% of developer time**. Implemented **unit-tests** with over **90% coverage**, and addressed critical vulnerabilities.
  - Enhanced and improved **logging service** by adding functionality to feed logs through **REST API**, excluding logs, multiline logging etc. Worked with Grafana Loki, Fluentd and Fluentbit
  - Successfully completed multiple **Proof of Concepts (POCs)**, directly impacting **architectural decisions**.

  Software Engineer (EEDP Technical Leadership Program)
  - Developed **micro-services** in **Go** and **Angular** to enable **Secure Access** for service users.
  - Developed and maintained the **micro-services** for **RBAC** (Role Based Access Control) Software; Resolved numerous bugs, increased unit test coverage to 90%, and addressed critical vulnerabilities.
  - Developed a **'System for Detecting breach using AI'** and filed patent for it.

  Software Intern (EID) *June 2020 - August 2020*
  - Developed a Web Based CT Scan Viewer using **VTK.js, Cornerstone.js** and **HTML**.

CERTIFICATION

- Advanced Certification Program on 'Digital Health and Imaging Technology', from **Indian Institute of Science (IISc)**. I recieved an **A+**. Topics Covered: Software as a Medical Device (SaMD), Machine Learning, Deep Learning and its application in Imaging.

ACHIEVEMENTS

- Secured a Rank of **2029, 99.8 Percentile** (out of 1 million candidates) in **JEE Advanced 2017** .
- I was rewarded for going Above and Beyond by GE HealthCare for filing the **patent**.

PROJECTS

- **Visual Cryptography** - Studied and Implemented different **Visual Secret Sharing** Schemes and compiled all the results to implement **Coloured Visual Secret Sharing Scheme for General Access Structures in Python**.
- **Spam SMS Filter in C Language** - Implemented a Spam SMS Filter in C Language.
- **Interactive Portfolio** - Created personal portfolio in the style of a game web-app using **React, Phaser3** and **Tailwind CSS**. (**vighaneshs.github.io**)
- **x64 Assembly Simulator**
- **Cryptanalysis** of different AES like Lightweight Cryptography Algorithms
- Various **Game Projects** on **Unity3D**
- Faculty Management System using **PostgreSQL, NoSQL(MongoDB) and NodeJS**.
- A Game on an FPGA

RELEVANT COURSES

- **Computer Science** : Data Structures and Algorithms, Operating Systems, Databases, Applied Cryptography, Computer Graphics, Networks, Software Engineering, Theory of Computation, Algorithms and Design, Computer Architecture, Programming Paradigms and Pragmatics, Digital Logic Design, Data Science.
- **Mathematics** : Calculus, Probability and Statistics, Linear Algebra, Integral Transforms, Differential Eq.