

# Vighanesh Sharma

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

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## EDUCATION

- **University of Texas** *Dallas, Texas. August 2024 - present*  
Master's of Science in Computer Science (MS CS)
- **Indian Institute of Technology (IIT)** *Ropar. August 2017 - June 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)
  - Architected, built and enhanced **PaaS components** for EHL, a **platform** that runs applications in a high-availability cluster in the hospital environment.
  - Revamped 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 increased the security.
  - Improved Flair component's reliability, which includes a **REST API** and an **AWS lambda** service written in **Go**; by **automating BDD tests in Gitlab Pipeline**, saving **20% of developer time**. Programmed **unit-tests** with over **90% coverage**, and addressed critical vulnerabilities.
  - Enhanced the Logging Service by integrating a REST API to streamline log feeding; implemented log exclusion and multiline logging, increasing log processing efficiency while minimizing data redundancy.
  - Concluded 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.
  - Engineered and maintained the **micro-services** for **RBAC** (Role Based Access Control) Software; Resolved bugs, increased unit test coverage to 90%, and solved critical vulnerabilities.
  - Innovated a '**System for Detecting breach using AI**' and filed **patent**.
- Software Intern (EID) *June 2020 - August 2020*
  - Created 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)**. Recieved an **A+**. Topics Covered: Software as a Medical Device (SaMD), Machine Learning, Deep Learning and applications in Imaging.

## ACHIEVEMENTS

- Secured a Rank of **2029, 99.8 Percentile** (out of 1 million candidates) in **JEE Advanced 2017**.
- Rewarded 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**, achieving around 81% accuracy
- **Interactive Portfolio** - Created personal portfolio in the style of a game web-app using **React**, **Phaser3** and **Tailwind CSS**. ( [vighaneshs.github.io](https://vighaneshs.github.io) )
- **x64 Assembly Simulator**
- **Cryptanalysis** of different AES like Lightweight Cryptography Algorithms
- **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.