

Yash Moar

VIRGINIA TECH – M.S. CE (FALL '25) · FORMER SOFTWARE ENGINEER AT HSBC

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Education

Virginia Polytechnic Institute and State University (Virginia Tech)

M.S IN COMPUTER ENGINEERING

- **Coursework:** Advanced Machine Learning, Artificial Intelligence and Engineering Applications, Database Management Systems

Vellore Institute of Technology, Vellore

B.TECH. IN ELECTRONICS AND COMMUNICATION ENGINEERING | SPECIALIZATION IN BIOMEDICAL ENGINEERING

- **Coursework:** Signals and Systems, Microcontroller and Embedded Systems, Digital Circuit Design, Analog Circuits, Applied Linear Algebra, Electromagnetic Field Theory, Principles of Communication Engineering

Skills

Programming Python, JavaScript, JAVA, C++, Typescript, MySQL, LaTeX, MATLAB

CI/CD | DevOps AWS, Docker, Kubernetes, Splunk, Jenkins

Front-end REST, Redux, React, HTML5, CSS, NextJS, NodeJS, Jest, React Testing Library

Core Competencies Microservices, Computer Architecture, Git, Data Structures & Algorithms, System Design

Development Boards Raspberry Pi, Arduino, NodeMCU

Blacksburg, Virginia

August 2025 - May 2027

Tamil Nadu, India

2018 - 2022

Work Experience

Virginia Tech

GRADER: ECE 2054 - APPLIED ELECTRICAL THEORY | ECE 3304 - INTRODUCTION TO POWER SYSTEMS

- Evaluate assignments, labs, and exams for **102 students**, ensuring **accurate** and **consistent grading**.
- Assist Dr. Virgilio Centeno in managing **grading workflows** and ensuring **timely evaluation cycles**.

HSBC Technology

SOFTWARE ENGINEER

- Developed and optimized microservices based web applications to **automate home loan document generation systems** for banking staff and customer operations across global markets.
- **Mentored** new team members and **redesigned their training curriculum**, resulting in a **40% reduction in onboarding time**.
- Engineered centralized configuration management using **AWS S3**, enabling real time parameter adjustments and reducing **deployment rollback by 20%** by ensuring consistent environments across development, QA, and production.
- Versatile Address Component: Created **5+ Higher Order Components** (HOCs) in React to build a flexible address component adaptable to 6+ regional requirements, reducing **redundant code by 20%** and cutting regional implementation time by 30%
- Increased code coverage by 20% while **resolving 900+ Sonar and Checkmarx vulnerabilities**, reducing code duplicity by 35% and ensuring zero critical or major issues in production.

VIT LEO - NGO

MEMBER OF THE BOARD

- Organized community **health outreach programs** and **educational initiatives** through school-based instruction.
- Developed a responsive website using JavaScript & ReactJS to streamline NGO event updates.

Key Projects

Digital Stopwatch Design on FPGA

FPGA PROJECT DEVELOPER

Dr. Elizabeth Rufus | Sep. - Dec. 2021

- Developed a **2-digit digital stopwatch** on an **FPGA** using **Verilog HDL**, integrating clock divider, counter, and 7-segment modules; simulated on **Multisim** and synthesized via **Xilinx Vivado**.
- Verified hardware operation with accurate 1-s pulse timing and 00-99 display through a **modular HDL design**.

Web-Based Medical Portal for Remote Patient Monitoring

INDEPENDENT DEVELOPER

Jan. 2022 - Feb. 2022

- Built a web-based medical portal supporting real-time monitoring of 5+ vitals, secure patient-doctor communication, and remote patient management using IoT integration.
- **Stack:** React.js, Node.js, MongoDB, Express.js, Socket.IO, Chart.js.

Diabetic Retinopathy Detection from Fundus Images Using MATLAB

PROJECT LEAD

Dr. Karthikeyan | Dec. 2021 - May 2022

- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.
- **Stack:** MATLAB, U-Net architecture, EfficientNet, Support Vector Machine, Convolutional Neural Networks (CNN).

Certifications & Awards

2024 **PAT on the Back Award**, at HSBC for exceptional performance and achievements

2023 **Pioneer of the quarter Award**, at HSBC for codebase optimization and vulnerability remediation

2020 **Algorithmic Toolbox**, UC San Diego | Coursera