

UMANG SHRESTHA

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TECHNICAL SKILLS

- Languages: Python, Go, JavaScript/ Typescript, Bash.
- Framework: React, Django, Robot Framework, Web Assembly.
- Databases: MongoDB, Mysql, SQLite, Redis.
- Libraries: Pandas, Numpy, Plotly, Raspberry, Flask, PyQt5.
- Protocol: DHCP, ARP, UART, TCP/IP, UDP, HTTP, GRPC, MQTT.
- Dev Tools: Docker, Git, Jira, Jenkins, Selenium, Wireshark.

EDUCATION

Master of Engineering Electrical and Computer Engineering Co-op

Jan 2022 - Present

University of Windsor, Windsor, ON

- Simulated Smart Parking Monitoring System in TinkerCAD and assembled the same in Arduino.

Bachelor of Engineering Biomedical Engineering

Sep 2014 - Jun 2018

Rajiv Gandhi Institute of Technology, Bangalore, India

- Created real-time Temperature and Humidity monitoring system based on Arduino and RFID for remote of medical cabinet to prevent degradation to quality of medicine.

PROFESSIONAL EXPERIENCE

Software Engineer

Apr 2019 - Present

Lifesignals Pvt. Ltd., Bangalore, India

- Converted entire repo of legacy code containing 5,000+ lines of deprecated Python2.7 to Python3.8 with complete unit testing to regression.
- Implemented socket-based IoT simulator in Golang capable of running 300+ simulations with data generated dynamically in runtime.
- Debugged, and maintained Java-based android wrapper with API server for communicating with embedded IoT devices using TLV encoded byte data.
- Led team of 4 for development of end-to-end automation for continuous testing of android app leveraging UIAutomator, ADB tools and Robot Framework.
- Initiated development of MQTT Flask server and Plotly dashboard for real-time monitoring of filtered sensor data and remote system monitoring status of relay devices.

QA Engineer

Jul 2018 - Mar 2019

Magal Healthcare, Bangalore, India

- Performed quality assurance for IEC 60601-2-25 and gathered evidence for FDA and HSA documentation.
- Wrote, executed and updated sanity, functionality and regression test cases for ensuring stability of the product.

- Configured network infrastructure such as VLAN, port isolation, mesh network and ethernet cables for testing infrastructure and measured throughput, packet loss, and congestion operating TCP dump and Wireshark.
- Customized ubuntu iso with inbuilt dependencies for quick deployment of testbeds and client-side microservices.

INTERNSHIPS

Research Intern

Feb 2018 - May 2018

IMN Technologies, Bangalore, India

- Conducted academic research and published research paper on "Synthesis and Characterization of ZnO nanoparticles"[<http://doi.org/10.1729/Journal.18354>].

PERSONAL PROJECTS

Inventory Tracker using Django

May 2022

<https://github.com/umangshrestha/Fall-2022-Shopify-Developer>

- Designed ORM, Rest API and workflow for inventory tracking using Django and Django Rest Framework.

Chrome Extension using React

Mar 2022

<https://github.com/umangshrestha/google-api-extension>

- Created React based web app and chrome extension for continuous OAuth validation for freelance project.

Retro Games in React

Dec 2021

<https://github.com/umangshrestha/ping-pong>

- Rebuilt ping-pong, tetris, tic-tac-toe and snake game using React.js

Technical Articles in Medium

Jun 2021

https://umangshrestha09.medium.com/?source=your_stories_page

- Published more than 70 articles for 8 publications for topics related to Python, Golang, Rust, React and Web assembly.

Toy Interpreter in Python

Feb 2021

<https://github.com/umangshrestha/nmi>

- Implemented Lexer, top-down Parser, Schematic analyzer, Evaluator and Stack Based VM from scratch.

CERTIFICATIONS

Full Stack Developer Course, freecodecamp.org

Jun 2022 - Present

Lean Six Sigma Green Belt, Institute of Industrial and Systems Engineers

Jun 2022

Triplebyte Engineering on Python and C++, Triplebyte

Jun 2022

Machine Learning, Coursera: Stanford Online

Nov 2018