

SAMRAT PRAVIN PATEL

Mobile: +1 - 5853192599

E-mail: sppa242@uky.edu, samratppatel@gmail.com

LinkedIn: [Sam Patel | LinkedIn](#)

Achievements: <https://tinyurl.com/PatelSamratAchievements>

OBJECTIVE

Highly motivated research focused self-starter back to school graduate Electrical Engineer seeking rewarding Internship/Fulltime position in SDN, Wireless, HPC Networking & Communications Technologies related domains.

EDUCATION

MS Electrical Engineering: University of Kentucky (**Graduating Year 2023- 2024**) **CGPA -3.667/4.00.**

MS Telecommunications Engineering: MS Telecommunications Engineering Technology, Engineering Technology Rochester Inst. Of Technology, NY (**Graduated May 2020**) **CGPA - 3.32/4.00**

B. E. (Computer Engr.): Thadomal Shahani College of Engineering, Mumbai, August 2003 University of Mumbai.

B.E. Final Year CGPA 3.0/4.00 Equivalent, Dec 2003

RELEVANT ACADEMIC COURSE & PROJECT

Next Generation Networks

- Designed & Implementation of Software Defined Network Testing Performance Metrics. Software Tools used - Python, OpenFlow Mininet API
- Study of Precipitation Variables due Climate Change Using Internet of Thing (IOT) and its Impact on Telecommunication Industry Tools used - Python, Arduino C Programming, MySQL Database, PHP

Network Planning & Design

- RFP for OPNET Simulation Tool & Convergence Time Simulation of RIP, OSPF and EIGRP Routing Protocols Using OPNET

Advanced Storage Technologies

- Architected & Executed Delay Tolerant Network Protocol Network Attached Storage Geostationary Satellite & High-Altitude Data Storage Platforms used - Open-Source Bundle protocol and NFS.

Advanced Network Engineering

- Architected & Executed Timing and Synchronization of GPS Stratum Level 1 Clocks in Network Time Protocol Servers for self-healing resilient network infrastructure simulation used - GNS3 Simulator.

High Performance Computing Cluster over Software Defined Network Testbed

- Architected & Executed HPC Cluster Swarm Service Architecture over Software Defined Network along with Network File Systems for LAN Gaming used - OpenFlow, FAUCET Controller, Zodiac FX SDN Switches, Ubuntu Linux OS, VMWare Workstation Hypervisor

IT SKILLS SET

Networking

- TCP/IP concepts, Sockets, CCNA Fundamentals, Configuration of Cisco 1700 Series Routers, Cisco 3750 L3 Switches, Wireshark, DHCP, Routing Protocols (RIP, OSPF, EIGRP, IGRP), VLAN Switching, Software Defined Networking Controllers (OpenFlow, OpenDaylight, OpenVSwitch, Pox, FAUCET), Zodiac FX SDN Switches, YAML, VMWare WorkStation Virtualization, Docker Containerization, HaProxy Load balancer, Basic Kubernetes Orchestration, perfSonar, Iperf, GENI Network Distributed System Testbed, Wireless Ad-Hoc Networks, Wireless Sensor Networks

Programming Languages

- MATLAB, Python, C Programming (For IOT Boards), Java, XML, Perl, PHP, Shell Scripting, OOPS Concepts

Embedded IoT Platforms

- Raspberry Pi 3, Arduino, Beagle bone Board, Arduino Motor Shield, H-Bridge Shield, PX4 Ardupilot UAV Controller

OS Platform

- MS Windows 10/Windows Server 2016/DOS/CentOS Linux/Sun Solaris/Red Hat Linux7/Ubuntu Linux, pfSense firewall, Raspbian OS

Databases & Advanced Data Storage Tech

- MS Access, SQL, PL/SQL, Oracle 8i, MySQL, FreeNAS, Network File System (NFS), iSCSI, Software Defined Storage- GlusterFS, Cloud AWS S3, Microsoft Azure Cloud.

ENTREPRENEURSHIP & RELATED WORK EXPERIENCE

Jan'22 – Present ECE Department University of Kentucky

Graduate Teaching Assistant

- Graded and mentored undergraduate ECE Dept Students Labs, Assignments, and exams in Advanced Computer Architecture, Circuits I, Circuits II, Engineering Computing EGR103 & EGR102 Student Projects in Arduino Embedded System, IoT Projects using MATLAB Programming Language

Aug'20 - Aug'21 UAV Lab ME Department University of Kentucky

Graduate Research Assistant

- Architected Aerial Wireless Network Infrastructure Architecture Planning & Design (Presently Ongoing)
- UAV Swarm Network Beyond Visual Line of Sight Long Distance Link Capacity and Link Budget Planning
- UAV Integration & Testing of various UAV experimental platforms

May' 18 – Present ThinkDrones – Applied Robotics, Mumbai

Co- Founder

- Architected & Executed micro-Unmanned Ground Vehicle for accessing confined spaces and extremely hard to reach places/ terrains using IoT boards Raspberry Pi, Arduino, C Programming and Python PySerial
- Researched on UGV Drones Platforms for Transportation and Last mile delivery using UAV and UGV

- Developed & Executed LoRaWAN Long Range Low Power GPS Tracking solution architecture for tracking payloads carried in areas without mobile cellular connectivity.
 - Researched micro drones for indoor greenhouse applications concept and study of Urban Heat Islands. (Ongoing)
 - Researched on Telerobotic Geo Drone Mapper concept for studying impact craters and working on deep learning image recognition models for ancient impact crater site recognition (Ongoing)
- Nov' 09 – Mar' 17 ThinkGPS Education & Research Pvt. Ltd, Mumbai Co-Founder**
- Architected & Executed GPS Location Based Live Tracking Services using Open-Source Database, GIS Mapping Visualization Web APIs, and GPS Sensor Fusion
 - Researched on IoT Solutions and Published Multidisciplinary Research Papers.
- Oct' 15 – Dec' 16 Computrics Integration Technologies Pvt Ltd, Mumbai Consultant Solar Power**
- Consulted for Sustainable Solar Power System Solutions Designing & Sizing.
 - Designed Long Distance WIFI Network and Wireless Link Budget Planning Solutions using Novel High Gain Long Distance Wi-Fi Antenna.
 - Implemented Embedded System Boards & IOT (Arduino) Solar monitoring Solutions.
- May' 07 – Jun' 08 M/s Computer Telephony Pvt. Ltd., Mumbai Engineer / System Analyst**
- Managed & maintained SMPP (Short Messaging Peer to Peer) SMS Gateways.
 - Tested and Implemented PBX Soft Switches and Integrated SIP based IVR services for Mobile Communication Networks.
 - Tested and Troubleshooted Analog IVR Telephony Cards
 - Tested IVR Services and Designed Call Flow.
- Feb' 05 – Mar' 06 M/s Majestic Software Ltd., Mumbai Trainee - Network Engineer**
- Gained exposure to various Call Centre Technologies, Call Centre Integration, different kinds of Telephony Platforms and Call Centre Administration.

ACHIEVEMENTS PORTFOLIO

- <https://tinyurl.com/PatelSamratAchievements>