Vinod Lasrado

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EDUCATION

Georgia Institute of Technology *Sep 2017 - Dec 2018*

Masters of Science in Electrical and Computer Engineering, Atlanta, GA, USA.

Pune Institute of Computer Technology (PICT) *June 2011 – May 2015*

Bachelors of Engineering in Electronics and Telecommunication, Pune, MH, India.GPA:3.81/4

Ranked 5th at the University of Pune in the second year of under-graduation among over 200,000 students.

RELATED COURSEWORK

Advanced Operating Systems, Digital Communication, Computer Aided Design for Communication Networks, System Programming, Operating Systems, Edge Computing and IoT, Embedded Systems, Computer Networks.

SKILLS

Programming Languages	C, C++, Python, Shell Scripting
Operating Systems	Microsoft Windows, Linux, AUTOSAR OS
Tools, Monitors, and IDEs	NS-3, Wireshark, Eclipse
Microcontrollers	ATMEGA, TI MSP430, Arduino, NXP LPC 1768, STM 32F40X, ARM R5
Networking Protocols	TCP, IP, HTTP, FTP, UDP.
Embedded Peripherals	CAN, I2C, SPI, ADC, DAC, Timers

PROFESSIONAL EXPERIENCE

KPIT Technologies *Sep 2016 - June 2017*

Software Engineer. Pune, MH, India

- Designed and Implemented of context switching, interrupt handling, timer management for ARM R5 RPU (Real-time Processing Unit) for AUTOSAR 4.2.1 OS.
- Setting up a virtual environment, toolchain, bash automation scripts, Makefile, linker scripts, and hardware for the project.
- Automating testing process using multithreading in Python effectively reducing testing time to 50 %.

Phi Robotics *June 2015 – Aug 2016*

Robotics Engineer. Mumbai, MH, India

Contributed to and developed multiple robotics, communication, and embedded systems related projects.

- Designed and implemented a communication protocol based on ZigBee for interconnection of robots to a master controller.
- Developed motion algorithms for a differential drive and skid steer robot to work on real-time embedded system
- Developed algorithms implementing inverse kinematics and motion profile for a Two-link robotic arm (SCARA).
- Implemented local path generation algorithm (Velocity Vector control) for camera-based obstacle avoider.
- Collected sensor data (LIDAR, Odometer, Gyroscope, Accelerometer) for SLAM robotic application on Intel Atom.
- Low level drivers (I2C, CAN, SPI) for STM 32F407

ACADEMIC PROJECTS

IoT DDoS prevention using Edge *Sep 2017 - Present*

- Researching IoT DDoS prevention to improve the detection time by leveraging edge infrastructure.
- Preventing traffic from creating congestion in the network by dropping malicious packets at the edge.

VIP e-Stadium *Sept 2017 – Present*

- Developing software to wirelessly reprogram the sensor nodes and
- Researching wireless channel monitoring and channel access mechanisms.

Analysis of TCP variants using ns-3 *Sep 2017 – Present*

- Simulated a network with congestion and compared the various congestion avoidance algorithms by measuring throughput.
- Simulating RED queues to further study congestion control techniques.

Centralized P2P File Transfer system *Sep 2017 – Present*

- Developing a concurrent server capable of communicating with multiple clients simultaneously.
- Allowing each client to download file from multiple peers.

Home Automation *Jan 2015 – May 2015*

- Created a system which could wirelessly control various home appliances with the help of a website.