Danis Fermi

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EDUCATION

NC STATE UNIVERSITY
MS in Computer Networks
Expected Jan 2018 | Raleigh, NC

NIT CALICUT
Grad. May 2014 | Calicut, India

COURSEWORK

GRADUATE
Switched Network Management
Internet Protocols
Computer+Network Security
Software Defined Networking
Routed Network Design
Advanced Topics in Internet Protocols

INDEPENDENT
Linux Novice (Linux Foundation)
Visualizing+Analyzing Data with Excel
Cloud Computing With Amazon Web Services

SKILLS

Cisco CCNP Exam trained as part of curriculum

PROTOCOLS
DHCP • HSRP • VRRP • GLBP • Etherchannel [LACP, PAGP] • ARP • STP [RSTP, MST, PVST] • BGP • OSPF • RIP • EIGRP • SNMP • OpenFLow • MQTT • CoAP • 6LoWPAN

TOOLS
OpenNMS • MIB Browser • GENI • Wireshark • Metasploit• GNS3 • Cisco Packet Tracer • tcpdump • MATLAB • MicroStrategy

PROGRAMMING
Python • C++ • SQL+PL/SQL

PLATFORMS
Windows • MAC • Linux • Cisco IOS

INTERESTS

Computer Networks • Network Design and System Administration • Internet of Things • Software Development

EXPERIENCE

VIRTUSAPOLARIS | Software Engineer
June 2014 – June 2016 | Chennai, India
Involved in DB+Big Data projects for Telecom and Banking sectors. Worked on Software Development and Customer-facing roles.

- Busniess Intelligence and Big Data project for CitiBank NAM (Microstrategy+Hadoop+UI)
- Data Migration project for Airtel Africa (SQL+PL/SQL)

PROJECTS

TRAFFIC ENGINEERING IN SOFTWARE DEFINED NETWORKS
Feb 2017 – Ongoing | Prof Rudra Dutta
Implement link utilization based traffic engineering and compare ECMP based OSPF that uses an SNMP-based-feedback model and an SDN solution.

ANALYZE TRAFFIC TRENDS IN SOFTWARE DEFINED NETWORKS
Jan 2017 – Ongoing | Prof Khaled Harfoush
Developing a Python based SDN application that queries switch counters to develop graphs and match it with known attack signatures. Research would be done on identifying the granularity of the rule population to identify different attacks. OVS switches and Ryu controller were used.

INDOOR MOBILE PHONE LOCALIZATION USING WIFI
Oct 2016 – Ongoing | Prof Muhammad Shahzad
Developing an Android application that triangulates the location of an indoor mobile object with respect to a WiFi access point, using localization and triangulation.

CHAT BASED PEER-TO-PEER FILE TRANSFER
Oct 2016 – Dec 2016 | Prof Muhammad Shahzad
Developed a chat application in Python that allows users to transfer files to peers using UDP sockets. Enhanced UDP by implementing TCP-like features Go-Back-N ARQ.

REVERSE PORT KNOCKING SHELL
Nov 2016 | Prof Alexander Kapravelos
Developed a hidden backdoor service in Python that uses raw sockets to passively listen for a specific sequence of knocks on server ports and if successful, download and execute a command from a HTTP server.

INDIRECT VECTOR CONTROL OF 3 PHASE INDUCTION MOTOR
Jul 2013 - May 2014 | Dr Rijil Ramchand K S
Implemented in Hardware Speed Control of three phase Induction Motor using Space Vector Pulse Width Modulation. Also finished coding the vector control algorithm that independently controls speed and torque of the machine. Learnt Assembly language coding of TMS320f2812 Processor to implement the algorithm.

COUNTING OBJECTS IN NON-UNIFORM MOTION
Dec 2012 - May 2013 | Prof Sureshkumar K S
Designed a counter that uses a feedback scheduling algorithm that takes differential inputs from photo-interrupters to count objects in non-uniform motion.

LINE FOLLOWER ROBOT
Sep 2010
Developed a robot that utilizes an array of IR sensors to calculate the reflectance of the surface beneath it and navigate.