Sina Kashipazha

PERSONAL DATA

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EDUCATION

B.Sc In Computer Engineering with Concentration in Software   **Tehran, Iran**
University of Tehran   2012 - 2017

PROFESSIONAL EXPERIENCE

- **Syntech Research Center**

  - Parax Electric Car   Nov 2018 - present
    Lead Software Engineer, designed and implemented cloud system which:

    – Receive bulk of encrypted data from cars

    – Load balance received data between multiple cache container

    – Use Reinforcment Learning to select next caches ????

    – Show cars data to end user in real-time ????

    – Use microservices architecture to implement above services

- **University of Tehran**

  - Computer Network Lab   Jan 2017 - Jan 2019
    Technical Staff, Network protocols, Router and MM-Wave Characterization

    – Hands on Experience in using Router, Switch and SDN enabled equipments

    – Hands on Experience in using floodlight SDN controller and mininet.

    – Developed instructions for computer network lab.

    – Designed and implemented vanet simulation tool set to compare various cache placement policies and learning alghorithms.

    – Designed fuzzy SDN controller that balanced load between switch using fuzzy logic.

    – Dockerized hadoop and assess various task placement policies in regard to network.

  - The Institute for Research in Fundamental Sciences (website) ????   July - Sep 2018
    Technical Staff, Devise solutions and tools ????

    – Designed and implemented a cloud based solution to run simulaotions remotely using Anaconda, JupyterLab and Docker

    – Designed and implemented a educational modules for computer network lab course

    – Designed and implemented a Markov chain, Monte Carlo, and multi-armed bandit Reinforcement Learning alghorithms

Field of Interest

- Distributing switch flow between multiple controller in SDN networks
- File Placement in Distributed File Systems using Online Alghorithms
- Task Scheduling Policies in Cluster Computing
- Load Balance Application Layer Traffic using Layer Three Switch
- Content Distribution in Vehicular Social Networks
- Cloud Orchestration

Technicals Skills

- **Network skills:**
  - **Expert:** Mininet, Floodlight Controller, Scapy
  - **Proficent:** Openflow protocol, SDN network
  - **Familiar:** GNS3 network simulator, Pox, MPLS, Segment Routing, Cisco switch
- **Cloud skills:**
  - **Proficent:** Docker, Docker-compose
  - **Fluent:** Hadoop
  - **Familiar:** Openstack, Ansible, Kubernetees

- **Frameworks and tools:**
  - **Expert:** Play Framework, Maven, Git
  - **Proficent:** Hibernate, Anaconda, Jupyterlab, Python data analysis libraries: NumPy, SciPy, Pandas, Matplotlib
  - **Familiar:** Spark, Node.js, HTML5, CSS
- **Programming languages:**
  - **Expert:** Java
  - **Proficent:** Python, C, JavaScript

Research Experience

- **University of Tehran**
  - **Computer Network Labratory**   Feb 2015 - Feb 2018
    Advisor: Prof. Ahmad Khonsari
    - **Thesis:** Reduction of Request Response in Hadoop Framework in regard to Network
    - **Thesis:** Update SDN Switch Routing table in response to Topology Change
    - **Thesis:** Cloud Based Copmuter Network Lab
- **Publications**
  - **Social-aware Mobile Road Side Unit for Content Distribution in Vehicular Social Networks** [abstract]

Extracurricular Activity

- **Teaching**
  - **Computer Network Lab** (Fall, Spring)   Jan 2017 - Jan 2019
- **Teaching Assistant (Graduate)**
  - **Advanced Computer network** (Fall) **EXCEPT: Fall 2017**   Sep 2016 - Jan 2019
- **Teaching Assistant (Undergraduate)**
  - **Computer Network** (Fall, Spring)   Jan 2016 - Jan 2019
  - **Operating System and Operating System Lab** (Fall,Spring) **EXCEPT: Fall 2016**   Jan 2015 - Jun 2018
  - **Design and Implementation of Compiler** (Fall),   Sep 2015 - Jan 2016
  - **Formal Languages and Automata** (Fall)   Sep 2014 - Jan 2015

Selected Projects - TODO

- **Water mark MATLAB**
  Theory of Electromagnetic course

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- **Mips**
  Theory of Electromagnetic course

- **OS scheduler, system call**
  Communications Circuits course

- **Namespaces**
  Electronics III course

- **http proxy**
  Microwave Laboratory course

- **TCP over udp**
  Digital Communications Laboratory course

- **Nat,Pat, load balancer floodlight**
  Wireless Communication course

  RSA
  Wireless Communication course

  Nat,Pat, load balancer floodlight
  Wireless Communication course