Milad Hakimi

+1 (514) 609 2235
miladhakimi33@gmail.com
linkedin.com/in/milad-hakimi/

Summary

- Diligent software engineer looking forward to bring my analytical and programming skills into the professional use.

Experiences

Work

2020 **Software Engineer at Yektanet**.

- Developing and optimising BidManager system (a system that generates optimum bids such that the advertisers' ads get a high chance to be viewed) using Django framework.
- Developing a monitoring system to show the impacts of the BidManager on the whole bidding system and provide a feedback on its functionality by comparing to other bidding methods.

Side Projects

- **Bia** *(Mobile Application)*
  Bia is an android application that enables you to inform people when you reach in a certain distance of them.
- **Medyab** *(Web Application)*
  Medyab is a platform to book an appointment with the doctors near you.

Selected Course Projects

- **Software Engineering**
  Dynamic Analysis using LLVM: In this project, I built a system that could detect specific bugs in the system (invalid writes and reads from memory, division by zero, ...) and fix them gracefully.
- **Database Systems II**
  Database Engine(YASE): YASE is a database engine that consists different components such as Storage Management, Indexing, Logging, and Concurrency Control(Locking). It was also tested using the standard benchmarks suits such as TCP-C.
- **Hardware and Software Co-Design**
  hardware accelerator: An accelerator for neural networks by implementing a multi layer perceptron on NIOS II and use it as custom instruction instead of a cpu-based MAC.
- **Realtime Embedded Systems**
  Segway Machine: It's a self-balancing machine that can stand and move on its two wheels. It receives the incline and acceleration on different axis through the sensors connected to the arduino and then decides how to move in order to keep its balance.

Education

2020–now **M.Sc. in Computer Science**, Simon Fraser University, Vancouver, Canada.

- under supervision of **Prof. Arrvindh Shriraman**

2015–2020 **B.Sc. in Computer Engineering**, GPA: 3.46/4, University of Tehran, Tehran, Iran.

- **B.Sc. Thesis:** "*Predicting the Network Traffic in Data Centers*," under supervision of **Prof. Ahamad Khodari**

Research Experiences

2020–now **Research Assistant**, *Simon Fraser University*, Computer Architecture Lab.

- Dynamic and static software analysis using compiler tools such as LLVM.
- Designing and implementing hardware accelerators by focusing on efficient memory systems.

2018–2020 **Research Assistant**, Institute for Research in Fundamental Sciences.

- Implementing a stochastic multiplier based convolution calculator and adding it to Tensorflow so that it can be used as one of its default functions.
- **CloNet:** A NOC hardware accelerator for neural networks. It was a hierarchical network of switches and routers connecting the processing elements on FPGA. Considering the fact that most of the messages in the system are broadcast or multicast, it reduced the delay of the network significantly in comparison to Mesh architecture.

Teaching

2021 **Teaching Assistant**, Computer Architecture.
Simon Fraser University

2018–2020 **Teaching Assistant**, Realtime Embedded systems, Operating Systems, Computer Networks, Computer-Aided Design.
University of Tehran

Related Courses

- Software Engineering
- Machine Learning
- Parallel and Distributed Computing
- Database Systems II
- Compiler Design and Implementation
- Hardware and Software Co-Design
- Realtime and Embedded Systems

Skills

- **Software Programming**
  c/c++ (LLVM), python (Keras, Tensorflow), Java, Matlab

- **Hardware Descriptor Languages and tools**
  Verilog, VHDL, Chisel
  Quartus, ISE, Design Compiler, Modelsim
- **Web/Mobile Developing**
  Python(Django), React, React Native, Java Script

Interests

Reading	Philosophy, Mythology, Anthropology
Coding	Creating simple but handy applications for myself