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EDUCATION

◇ **IT University of Copenhagen**, Copenhagen, Denmark — 2021 - now
— **Ph.D.** in Computer Science — **ECTS: -/30**

***Coursework*:**

Course	Status
Dissemination of Research to Different Audience	Passed/ 2 ECTS
Deep Learning: A Computational Efficiency Perspective	On Progress/ 2 ECTS
Introduction to Machine Learning	On Progress/ 5 ECTS

◇ **Sharif University of Technology**, Tehran, Iran — 2016 - 2018
— **M.Sc.** in Computer Engineering - Hardware — **GPA: 18.42/20**

***Coursework*:**

Course	Grade
Advanced Computer Architecture	17.5/20
Green Computing	20/20
Fault Tolerant Systems	17.3/20
Embedded System Design	17.4/20
M.Sc. Dissertation	19.7/20 (Excellent)

◇ **University of Tabriz**, Tabriz, Iran — 2012 - 2016
— **B.Sc.** in Computer Engineering - Hardware — **GPA: 18.42/20**

***Coursework*:**

Course	Grade	Course	Grade
Digital Design	18.5/20	Data Structures	20/20
Computer Architecture	19/20	Operating Systems	18.5/20
Microprocessor	20/20	VLSI Design	20/20
Electrical Circuits	19/20	B.Sc. Project	20/20

◇ **Shahid Furoughi High School, Miandoab, Iran** — 2008 - 2012
— High School Diploma in Mathematics and Physics — **GPA: 19.05/20**

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RESEARCH INTERESTS

◇ Computer Architecture
◇ GPUs and Heterogeneous Systems
◇ Hardware Accelerators for Machine Learning and Deep Learning applications

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HONORS AND AWARDS

◇ **Ranked 1st in terms of cumulative GPA among Computer Hardware Engineering Students, University of Tabriz (2016)**

◇ **Admitted to the M.Sc. program at Sharif University of Technology as an Exceptional Talented Student (2016)**

TECHNICAL SKILLS

◇ **Programming Languages :** Python, C++, C, Java, MATLAB, VB
◇ **Hardware Description Language (HDL) :** Verilog
◇ **Simulation Tools :** Altera Quartus II, Mentor Modelsim, Proteus Design Suite, Synopsys Hspice and Pspice, GPGPU-Sim.
◇ **Document Preparation :** MS Office, LaTeX.
◇ **Machine Learning Framework :** TensorFlow
◇ **Having Experience with :** Linux Terminal, Git, MVC, MySQL, VB programming for Microsoft Excel

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TEACHING EXPERIENCE

◇ **Teaching Assistant**
- Department of Computer Science, IT University of Copenhagen

Course	Role	Teacher	Semester	Year
Deep Learning: A Computational Efficiency Perspective	TA	Prof. Pnar Tozun	Spring	2022

- Department of Computer Engineering, Sharif university of Technology

Course	Role	Teacher	Semester	Year
Computer Architecture Lab.	Head TA	Prof. Sarbazi-Azad	Summer	2017
Microprocessor Lab.	Head TA	Prof. Sarbazi-Azad	Fall	2017
Computer Architecture	Head TA	Prof. Jahangir	Spring	2018
Computer Architecture Lab.	Head TA	Prof. Jahangir	Spring, Summer	2018
Microprocessor Lab.	Head TA	Prof. Jahangir	Spring, Summer	2018

- Department of Electrical and Computer Engineering, University of Tabriz

Course	Role	Teacher	Semester	Year
Logic Circuit Design	TA	Prof. Mina Zolfy	Spring	2016

◇ **Fundamentals of Programming Tutor**

Teaching first-year undergraduates how to program with C	Spring, Summer	2018

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RESEARCH EXPERIENCE

◇ **IT University of Copenhagen** **November 2021 - Now**
- Data Intensive Systems and Applications (DASYA)
- Supervisor: **Prof. Pnar Tozun**
Focus of my research is on Resource-Aware Data Science. The goal is to increase the Efficiency and Utilization of current processing engines (GPUs) for Deep Learning. The research output will reveal more insights about the nature of Deep Learning tasks on hardware. Also, it will propose mechanisms for higher utilization and efficiency of current systems.

◇ **Sharif University of Technology** **Sep. 16 - Aug. 19/ Sep. 20 - Feb. 21**
- High Performance Computing Architectures and Networks (HPCAN)
- Supervisor: **Prof. Hamid Sarbazi-Azad**
The focus of my research was to introduce an energy and area efficient on-chip memory design with negligible performance overhead for GPU Streaming Multiprocessors (SMs). I implemented and analyzed proposed designs using simulators such as GPGPU-Sim, and self-written C codes.
Over those years I have accomplished two submission, one was submitted to *IEEE CAL* 2020. Then the edited journal version was submitted to the IEEE TPDS 2021.

PROJECTS

◇ **A Unified On-chip Memory for Shared and L1 Cache Accesses for GPUs in C++**

- For my master's thesis, I worked on the implementation of a unified on-chip memory to serve both the shared memory and level one data cache accesses. I logged the addresses generated by the GPGPU-Sim simulator, and studied their locality, lifetime, read-after-write frequency behavior by developing C++ programs. Then, based on the observations, a unified structure with locking capability replaced level one data cache and shared memory in the GPGPU-Sim simulator. The result of this research was submitted to two publishing: CAL 2020, TPDS 2021.

◇ **Morris Mano's Basic Computer**

- During the Computer Architecture course in my bachelor's, I designed and implemented a basic computer in the Quartus II Schematics. Then in my master's when I was computer architecture course's TA, I implemented this basic computer once more in Verilog HDL with more details. It can be checked on my GitHub page Here.

◇ **Cache with different Configurations**

- I implemented direct-mapped and set-associative cache for my advanced computer architecture course. Then, I did experiments on it to observe the effects of different policies on hit/ miss rate. It is accessible here on GitHub.

◇ **Python Basics; Data Structures and Algorithms, Programming with CUDA, Neural Networks Tutorials with Examples on GitHub**

- In my free times, I usually work on developing tutorials for those who like to learn easily. With doing this, I try to review and fill my knowledge gaps as I believe the famous saying that the best way to learn is to teach. You can check them out on my GitHub page.

◇ **Web Development Projects**

- I worked as a back-end developer in several web development teams. I was developing queries to the databases to get out the needed data for the designed forms by the front-end team. Additionally, I was responsible for providing APIs to send the needed data to the mobile programmers. Also, I contributed to a URL-Shortener on GitHub. Additionally, I developed an API in Go programming language to ease the life of new people (to Go) who want to write API endpoints in Go, and they don't know how and where to start.

◇ **Design and Implementation of An Efficient Archiving System in Excel and some other automation systems in MS**

- During my conscription, I designed, implemented, and organized an efficient archiving system in Excel with VBA regarding the documents' type and their transactions. Before that, most of the work was done manually, and it was time-consuming. However, after automatizing the processes, the working crew were idle for most of the time.

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LANGUAGE SKILLS

◇ **English**: Fluent.

Taken Test	Reading	Listening	Speaking	Writing	overall
TOEFL on July 10, 2021	26	26	24	24	100

◇ **Persian**: Native.
◇ **Turkish**: Fluent.

◇ **Azerbaijani**: Mother Tongue.
◇ **Danish**: Basic.