

# Navid Akbari

## Curriculum Vitae

## Education

2021–2023 **M.Sc. in Computer Science**, Faculty of Science, University of Calgary, Calgary, Canada

- GPA: **4/4**
- Supervisors: Dr. Mea Wang and Dr. Diwakar Krishnamurthy
- Thesis: iStream platform, a flexible container-based multimedia streaming application

2016–2020 **B.Sc. in Engineering Science in Computer Science sub-field**, *Department of Engineering Science*, Faculty of Engineering, University of Tehran, Tehran, Iran

- Overall GPA: **18.35/20** (1<sup>st</sup> Rank among all the students of the Department)

## Research Interests

- Cognitive Neuroscience
- Computational Neuroscience
- Machine Learning
- Cloud Computing

## Work Experience

Sep. 2023 - **Research Assistant at Nicola Computational Neuroscience Lab**, *University of Calgary*, Canada  
Present Employed as a Machine Learning Scientist, contributing to the development of an innovative Spiking Neural Network (SNN) using the Conductance-Based Morris-Lecar Model.

Sep. 2020 - **Software Engineer at Pegah Co. (known as Tapsell)**, *Tehran*, Iran  
Nov. 2020 Tapsell is the leading company in the online advertising industry in Iran. I am working in the front-end chapter and helping to do some beneficial projects for all the company teams.

Summer 2019 **Internship at Parto Negar Persia Co. , Tehran**, Iran  
Contributing to the research and development of one of the company projects. Also, I developed a web page and helped for debugging an android application for the project.

Summer 2018 **Research Center**, *University of Tehran*, Tehran, Iran  
Connecting the NodeMCU ESP8266 module to the flowmeter module and sending its data via the Internet and HTTP to the server and save it to the MySQL database.

## Publication

Accepted "iStream: A Flexible Container-Based Testbed for Multimedia Streaming," IEEE MIPR 2023

## Awards and Honors

Fall 2022 **Faculty of Graduate Studies International Master's Scholarship** from Graduate Award Competition, University of Calgary - Amount: CAD 10,000

Winter 2022 **Departmental Research Assistant Award** from Faculty of Computer Science, University of Calgary - Amount: CAD 11,000

2021 & 2022 **International Graduate Student Recruitment Award** from Faculty of Computer Science, University of Calgary - Amount: CAD 2,000

2019	<b>Received Scholarship</b> from the University of Tehran Sponsors Foundation as an exceptional talent student
2017 – 2019	<b>Received Scholarship</b> from Faculty of Engineering as an exceptional talent student
2017 & 2019	<b>F.O.E (Faculty of Engineering) Award:</b> Ranking 1 <sup>st</sup> among all of Engineering Science students, University of Tehran

## Summer School

Summer 2023	<b>Computational Neuroscience</b> Course in Neuromatch Academy Project title: Human Connectome Task Analysis, Classifying Tasks from BOLD Signal
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## Selected Teaching Experience

Fall 2021	- Teaching Assistant, " <b>Explorations in Information Security and Privacy</b> "
Winter 2023	Instructor: Dr. R. Henry, University of Calgary
Winter 2021	Teaching Assistant, " <b>Introduction to Computer Science for Computer Science Majors II</b> "
	Instructor: Dr. J. Tam, University of Calgary
Fall 2019	- Teaching Assistant, " <b>Computer Networks</b> "
Spring 2020	Instructor: Dr. A. Khonsari, University of Tehran
Fall 2019	Teaching Assistant, " <b>Numerical Analysis Methods</b> "
	Instructor: Dr. H. M. Darian, University of Tehran
Fall 2018	Teaching Assistant, " <b>Data Structures</b> "
	Instructor: Dr. A. Kamandi, University of Tehran
Fall 2018	Teaching Assistant, " <b>Systems Analysis</b> "
	Instructor: Dr. S. Mirzai, University of Tehran

## Selected Academic Projects

Spring 2021	<b>Implementation</b> of five projects on different machine learning topics such as Image Classification with CNN and FCN, Auto-encoder model to denoise an image dataset, U-net model for signal denoising, RNN model to predict new daily cases of COVID-19 in Python and Jupyter Notebook Advisor: Dr. R. Souza, Data Mining and Machine Learning
Spring 2021	<b>Classification</b> of Driving Behaviours Based on Deep Learning Algorithms like CNN and LSTM Advisor: Dr. R. Souza, Data Mining and Machine Learning
Spring 2020	<b>Implementation</b> of seven projects on different artificial intelligence topics such as Search Algorithms, Genetic Algorithms, Classification, Multi-layer Neural Networks, and Regression. All these projects were implemented in Python and Jupyter Notebook Advisor: Dr. H. Fadaei, Artificial Intelligence Course
Spring 2020	<b>Implementation</b> of a simple version of channel coding using Huffman algorithm and source coding using Convolutional encoding in Python Advisor: Dr. P. Shariatpanahi, Data Transmission Course
Fall 2019	<b>Development</b> of a web application for "Meeting Management System" using Django for backend, React for frontend Advisor: Dr. R. Khosravi, Software Engineering Course
Fall 2019	<b>Implementation</b> of GHS distributed algorithm for finding the minimum spanning tree in a graph by using the Kompics framework and Java Advisor: Dr. F. Faghah, Distributed Systems Course
Fall 2019	<b>Implementation</b> of MapReduce distributed algorithm for counting the number of each word in the given file by using the Kompics framework and Java Advisor: Dr. F. Faghah, Distributed Systems Course

Spring 2019	<b>Implementation</b> of a BitTorrent system with custom network topology using Mininet virtual machine and Python Advisor: Dr. A. Khonsari, Computer Networks Course
Spring 2019	<b>Development</b> of a web application for "Occupation Finding System" using java, web languages, and MySQL for Database Advisor: Dr. E. Khamespanah, Internet Engineering Course
Fall 2018	<b>Implementation</b> of a multithreaded neural network using pthread and semaphores in C++ Advisor: Dr. M. Kargahi, Operating Systems Course
Fall 2018	<b>Simulation</b> of solar system using n-body problem approach using Matlab Advisor: Dr. H. Darian, Numerical Analysis Methods 1 Course
Spring 2018	<b>Implementation</b> of image noise reduction and image compression with Huffman Coding and Zig-Zag pattern using Matlab Advisor: Dr. A. Adhami, Systems Analysis Course

## Technical Skills

Programming	Python, C/C++, Java, JavaScript, MATLAB, SQL
Web/DB Technologies	HTML, CSS, Bootstrap, NodeJS, ReactJS, Angular, Docker, MySQL
Tools	Git, L <sup>A</sup> T <sub>E</sub> X, Wireshark, Mininet, Kompics, Alloy, IntelliJ IDEA, Visual Studio Code, DataGrip, Postman, Simulink, MS Word, MS Excel, MS Powerpoint
Operating Systems	Mac OS, Microsoft Windows, Linux(Esp. Ubuntu, Kali)

## Volunteering and Activities

2022–Present	<b>President</b> of Persian Gulf Club Association in University of Calgary
2021–2022	<b>Vice president Internal</b> of Computer Science Graduate Society
2017–2019	<b>Member of</b> Student Association of Engineering Science
Fall 2017	<b>Member of</b> executive of the 3 <sup>rd</sup> Engineering Science Conference

## Languages Skills

<b>Persian:</b>	Native
<b>English:</b>	Fluent
IELTS scores:	Overall 7.0 (Listening: 8.5 - Reading: 7.0 - Speaking: 6.5 - Writing: 6.0)
<b>Arabic:</b>	Only Reading

## References

Excellent references are available upon request