# Armin Saadat

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#### **EDUCATION**

# University of British Columbia

Sep. 2022 - (Exp) May. 2024

M.Sc. in Electrical and Computer Engineering - Applied Science

Vancouver, BC, Canada

Related courses: Deep Learning  $(A^+)$  - Constrained Optimization & Image Processing  $(A^+)$  - Machine Learning (Teaching Assistant)

#### Sharif University of Technology

Sep. 2017 - May. 2022

B.Sc. in Computer Engineering - GPA: 3.85/4 (Ranked among top 10 students)

Tehran, Iran

Ranked 1st in courses: Machine Learning, Artificial Intelligence, Linear Algebra, Probability & Statistics, Algorithm Design, Calculus

#### **Publications**

#### • 3D Human Pose Forecasting with Uncertainty

Armin Saadat, Saeed Saadatnejad, Taylor Mordan, Alexandre Alahi.

submitted to CVPR 2023

• Efficient 3D Image Segmentation via Context Completion

Armin Saadat, Mahdieh Soleymani Baghshah.

submitted to CVPR 2023

• Towards Human Pose Prediction using the Encoder-Decoder LSTM - link to abstract

Armin Saadat, Nima Fathi, Saeed Saadatnejad.

published in ICCV 2021

# RESEARCH & PROFESSIONAL EXPERIENCE

#### University of British Columbia

Sep. 2022 - (Exp) Sep. 2024

Machine Learning Researcher - Advisor: Prof. Purang Abolmaesumi

Vancouver, Canada

- $\circ$  Designed and tuned an unsupervised learning method to estimate ejection fraction which is a crucial biomarker of heart failure.
- Implemented a Graph Convolutional Network capable of 1) Interpreting the systolic and diastolic cardiac cycles, and 2) Outperforming the state-of-the-art by over 15% with a much lower number of parameters compared to prior work.

### Swiss Federal Institute of Technology Lausanne (EPFL)

Jul. 2021 - Nov. 2021

Research Assitant - Advisor: Prof. Alexandre Alahi

Lausanne, Switzerland

- Implemented and tuned a Recurrent Neural Network for human pose prediction & forecasting the trajectory of pedestrians.
- $\circ$  Won  $3^{rd}$  place in the **Stanford Challenge** on Social Motion Forecasting: source-code
- $\circ$  Developed a comprehensive library in PyTorch for pose prediction, supporting over 10 models and 8 datasets.

#### Sharif University of Technology

Jan. 2022 - Jul. 2022

Research Assistant - Advisor: Prof. M.Soleymani Baghshah

Tehran, Iran

- $\circ \ \ Proposed \ and \ implemented \ a \ weakly-supervised \ segmentation \ method \ to \ label \ 2D \ slices \ of \ 3D \ data. \ \ \underline{source\text{-}code}$
- $\circ$  Combined U-Net with LSTMs to take advantage of the sequential information of consecutive slices, and improved the state-of-the-art by 5% on abdominal datasets.

#### Analysaur | A Startup on Digital Marketing and Advertising

Jul. 2019 - Aug. 2020

Data Science Engineer - Product Manager

Tehran, Iran

- $\circ~$  Created an all-in-one online platform connecting buyers, sellers, and advertisers in social media.
- $\circ\,$  Programmed in Python, JavaScript, GO; using frameworks like Django, ReactJs, and VueJs.

# Weblite | The Largest Online Educational Platform in Iran

Jan. 2019 - Jun. 2019

Software Development Engineer

Tehran, Iran

- Developed Weblite messenger, the core of the platform, using VueJs.
- $\circ~$  Designed and developed the back-end, database, and API of several applications used in the platform.

# Honors and Awards

• Vector Scholarship in Artificial Intelligence Recipient

2022

 $\bullet$  Ranked among top 0.01% participants in the Iranian National Universities Entrance Exam

2017

Member of the Iran's National Elites FoundationMember of the Sharif University Basketball Team

2017 - 2022 2017 - 2022

# TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, JavaScript

Frameworks & Libraries: PyTorch, PyTorch Geometric, NumPy, OpenCV, Scikit-Learn, Pandas, Django, VueJs

Developer Tools: Git, Trello, Jira, LATEX, Google Cloud Platforms