

FERESHTE FORGHANI

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RESEARCH INTERESTS Machine Learning, Deep Learning, Computer Vision, Artificial Intelligence

EDUCATION **Sharif University of Technology**, Tehran, Iran
B.S. in Computer Engineering 2017-present
Major GPA : **19.45/20** , GPA till now : **18.53/20**
Coursework :
Machine Learning (20/20), Artificial Intelligence (19.9/20), Modern Information Retrieval (18.7/20), Probability and Statistics (18.6/20), Linear algebra (19.5/20), Signal processing (19.1/20), Data Structures and Algorithms (18.3/20), Advanced Programming (20/20)

Farzanegan High School, National Organization for Development of Exceptional Talents(Nodet), Iran
Diploma in Mathematics and Physics 2013 - 2017
GPA : **19.90/20**

RESEARCH EXPERIENCE **Internship at Ecole Polytechnique Federale de Lausanne (EPFL)**
Advised by Prof. A. Alahi, Visual Intelligence for Transportation (VITA) Lab Summer 2021
Finding natural adversarial examples to test the reliability of human trajectory predictors using density estimation techniques such as Masked autoregressive flow, RealNVP and Masked autoencoder for distribution estimation.

B.Sc. Project at Sharif University of Technology May 2021 - present
Advised by Prof. Shohreh Kasaei, Image Processing Lab (IPL), Department of Computer Engineering
Investigating Adversarial attacks against Deep Neural Networks, specifically focusing on 3D point-Cloud networks (PointNet and PointNet++).

Research Assistant at Sharif University of Technology. Oct 2020-present
Advised by Prof. Mohammad Hossein Rohban, Medical Image Analysis Group, Department of Computer Engineering
Unsupervised learning methods (simCLR, MoCo, simsiam) to train Unet encoder with unlabeled data and improve IoU score after fine-tuning with labeled data.

WORK EXPERIENCE **Machine Learning Intern at Sinaweb Company** Summer 2020
Worked on ML based forgery recognition through handwriting style recognition.

TECHNICAL SKILLS **Languages and Tools:**

- Programming: C/C++, Python, Java
- Data Manipulation: Pandas, SQL
- Vision/ML Libraries: TensorFlow, PyTorch, Numpy, Scikit-Learn, NLTK
- Hardware: MIPS32, Verilog

Software: Quartus, ModelSim, GEM5
Web and Mobile app Development: Django, HTML, CSS, JS, Android, Swift
Operating Systems: Windows, Macintosh
Typesetting: LATEX, Microsoft Office

SOCIAL SKILLS Teamwork, Fast Learner, Problem Solving, Creativity

UNIVERSITY PROJECTS	<ul style="list-style-type: none"> Cleaning data and training models to find best Clickthrough Rate, Machine Learning Course Project (python) <i>Fall 2020</i> Preprocess, classify ad cluster english Ted Talks and persian wikipedia data and design an information retrieval system with search and query correction abilities, Modern Information Retrieval Course Project (python) <i>Fall 2020</i> Project Github Link Food recipe provider app which provides recipes from Spoonacular api, Mobile programming Course Project (android) <i>Spring 2021</i> Project Github Link Appointment making website, System analysis and design Course Project (django framework) <i>Spring 2020</i> Project Gitlab Link Farm frenzi Game, Advance Programming Course Project (Java) <i>Fall 2018</i> Project Github Link Pacman, Fundamenetals of Programming project Course Project (C) <i>Fall 2017</i> Project Github Link
HONORS AND AWARDS	<p>National University Entrance Exams (Konkur) <i>2017</i> Ranked 35th among 300,000 in Mathematics and Physics. Ranked 101th among 6,000 in English Language.</p> <p>Member of national ELITE foundation <i>2017 - Present</i> Recipient of the Grant for Undergraduate Studies from the Iranian National Foundation of Elites.</p> <p>Recognized as talented student in entry exam of NODET among students for middle and high school. <i>2010 and 2013</i></p>
TEACHING EXPERIENCE	<p>Teaching Assistant (Sharif University of Technology)</p> <ul style="list-style-type: none"> Machine Learning(graduate course), Dr. A. Hosseini <i>Spring 2021</i> Artificial Intelligence, Dr. MH. Rohban <i>Spring 2021</i> Computer Architecture, Dr. H. Asadi <i>Spring 2021</i> Computer structure and language, Dr. L. Arshadi <i>Fall 2020</i> Digital Design, Dr. Sh. Hesabi <i>Spring 2020</i> Computer structure and language, Dr. H. Asadi <i>Fall 2019</i> Advance programming, Dr. B. Hatami <i>Spring 2019</i>
SOCIAL EXPERIENCE	<ul style="list-style-type: none"> Member of Data Days Scientific Group (DataDays- A Machine Learning and Data Science Competition) Sharif University of Technology <i>Nov 2019 - Mar 2020</i> Contestant of Webelopers (A web competition) Sharif University of Technology <i>Oct 2019</i> Data Days Executive Staff, Sharif University of Technology <i>Feb 2019</i> ACM Executive Staff, ACM-International Collegiate Programming Contest <i>Dec 2018</i> Sharif AI Executive Staff, Sharif Artificial Intelligence Challenge <i>Mar 2018 and Mar 2019</i>
LANGUAGES	English (Fluent) TOEFL : Will be taken on the 9th of Oct Persian (Native)