Fereshteh Forghani

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RESEARCH INTERESTS

Computer Vision, Machine Learning, Deep Learning, Medical Image analysis, Robotics, Autonomous Driving

EDUCATION

- **Sharif University of Technology**, Tehran, Iran
  B.S. in Computer Engineering   *2017-present*
  Major GPA: 19.42/20 , GPA till now: 18.41/20
  Relevant Coursework:

    Machine Learning (20/20), Artificial Intelligence (19.9/20), Probability and Statistics (18.6/20), Linear algebra (19.5/20), Modern Information Retrieval (18.7/20), Signal and Systems (19.1/20), Data Structures and Algorithms (18.3/20), Advanced Programming (20/20)

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

RESEARCH EXPERIENCE

- **Remote Internship at École Polytechnique Fédérale de Lausanne (EPFL)**
  Advised by Prof. A. Alahi, Visual Intelligence for Transportation (VITA) Lab *Summer 2021*
  I am working on human image synthesis/prediction using GANs.

- **B.Sc. Project at Sharif University of Technology**   *May 2021 - present*
  Advised by Prof. Shohreh kasaei, Image Processing Lab (IPL), Department of computer science.
  I am investigating Adversarial Attacks and Defenses against Deep Neural Networks (such as PoinNet), specifically focusing on using Web-Scale Nearest-Neighbor Search defenses.

- **Research Assistant at Sharif University of Technology**.   *Oct 2020-present*
  Advised by Prof. Mohammad Hossein Rohban, Medical Imaging group, Department of computer science.
  The aim of this project is to use a contrastive representation learning method to train our network with unlabeled data and improve IoU score after fine-tuning with labeled data.

WORK EXPERIENCE

- **Machine learning intern at Sinaweb company**.   *Summer 2020*
  Working on methods for intrinsic plagiarism detection using machine learning .
  The aim of this project was to develop a plagiarism detection method. This method is using variations in writing style to identify potentially plagiarized passages. design:

HONORS AND AWARDS

- **National University Entrance Exams (Konkur)**

  - Ranked 35th among 300 000+ in Mathematics and Physics.   *Sep 2017*
  - Ranked 101th among 6 000+ in English Language.   *Sep 2017*

- **Member of national ELITE foundation**, Recipient of the Grant for Undergraduate Studies from the Iranian National Foundation of Elites.   *2017 - Present*

- Recognized as talented student in entry exam of NODET among Yazd students for middle and high school. *2010 and 2013*

SOCIAL EXPERIENCE
- Member of Data Days' Scientific Group (DataDays'- A Machine Learning and Data Science Competition) Sharif University of Technology *Nov 2019 - Mar 2020*
- Contestant of Webelopers (A web competition) Sharif University of Technology *Oct. 2019*
- Data Days' Executive Staff, Sharif University of Technology *Feb 2019*
- ACM Executive Staff, ACM- International Collegiate Programming Contest *Dec 2018*
- Sharif AI Executive Staff, Sharif Artificial Intelligence Challenge *Mar 2018 and Mar 2019*

UNIVERSITY PROJECTS
- Finding Best Model for Tapsi's Click-Rate Dataset, Machine Learning (python) *Fall 2020*
- Information Retrieval System, Modern Information Retrieval (python) *Fall 2020*
- Exam Scheduler with Genetic Algorithm, Artificial Intelligence (Python) *Fall 2019*
- Pezeshkat website (appointment making website), System analysis and design (django framework) *Spring 2020*
  Project Gitlab Link
- Farm Frenzi, Advance Programming Course Team Project (Java) *Fall 2018*
  Project Github Link
- Pacman, Fundamenetals of Programming project (C) *Fall 2017*

TEACHING EXPERIENCE
Teaching Assistant (Sharif University of Technology)
- Machine Learning, Dr.A.Hosseini *Spring 2021*
- Artificial Intelligence, Dr.MH.Rohban *Spring 2021*
- Computer Architecture, Dr.H.Asadi *Spring 2021*
- Computer structure and language, Dr.L.Arshadi *Fall 2020*
- Digital Design, Dr.Sh.Hesabi *Spring 2020*
- Computer structure and language, Dr.H.Asadi *Fall 2019*
- Advance programming, Dr.B.Hatami *Spring 2019*

SKILLS
- TECHNICAL
  - Languages and Tools: Python(Experienced in PyTorch, Numpy, Pandas, NLTK), R, C/C++, Java, SQL, Git, Racket, MIPS32, Verilog
  - Software: Quartus, ModelSim, GEM5, Git, Adobe Photoshop
  - Web and Mobile app Development: Django, HTML, CSS, JS, Android
  - Operating Systems: Windows, Macintosh
  - Typesetting: LaTeX, Microsoft Office
- SOCIAL
  - Teamwork, Fast Learner, Problem Solving, Creativity

LANGUAGES
- Persian (Native)
- English (Fluent)
- Arabic (Intermediate)