

# Aref Tabatabaei

 (+98) 9134327684 |  arefmytb@gmail.com |  arefmytb.github.io |  ArefMYTB |  aref-tb

## EDUCATION

### Amirkabir University of Technology (Tehran Polytechnic)

Tehran, Iran

Bachelor of Science in Computer Engineering

Sep. 2019 - Jan. 2024

- GPA:** 15.83/20
- Selected Courses:** Computational Intelligence | Applied Linear Algebra | Algorithm Design | Engineering Statistics | Robotics | Database Design

## PUBLICATIONS

- Aref Tabatabaei, Zahra Dehghanian, Negar Movaghatian, and Maryam Amirmazlaghani. "NO MORE BLAH-BLAH: EMBRACING REAL TEXT IN THE IMAGE SYNTHESIS WORLD." In The Second Tiny Papers Track at ICLR 2024.

Preprints

- Aref Tabatabaei, Zahra Dehghanian, and Maryam Amirmazlaghani. "A Conditional Inpainting Approach For End-to-End Artifact Removal In VTON and Pose Transfer." Preprint, 2024.

## RESEARCH & WORK EXPERIENCES

Freelancer

Mar. 2024 - Current

### Web Development

- Full-Stack:** Developed a full-stack website using React and Django along with Sanity. Feel free to visit it [Here](#).
- Back-End:** Technical projects with Django & Golang like [ToDo List](#), [Slack Bot](#), [Blog Post](#), [Book Recommender](#).

Amirkabir University of Technology (Polytechnic Iran)

Dec. 2022 - Jan. 2024

### Undergraduate Research Assistant Under the Supervision of Prof. Maryam Amirmazlaghani |

Statistical Machine Learning LAB

- Image Generation & Text-to-Image Models:** Engaged with Generative Adversarial Networks (GAN) and diffusion models to advance the field of image generation, focusing on innovative approaches to integrate text into images.
- Text Integration Into Image:** Led a project that successfully integrated text into images, culminating in a paper published at the International Conference on Learning Representations (ICLR) Tiny Papers, where I served as the lead author.
- Artifact Removal:** Conducted research to remove artifacts in virtual try-on and pose transfer tasks, resulting in a paper with a preprint available on arXiv, for which I was the lead author.

Pars Jahd

May. 2022 - Dec. 2022

### Avatar Creation and Human-Computer Interaction Developer

- Custom Avatars:** Developed personalized 3D avatars for clients by processing their images, creating tailored digital representations.
- Human Detection & Tracking System:** Designed and implemented a system using MediaPipe to detect and track human movements in real time.
- 3D Avatar Control:** Integrated live camera data with Godot Engine to enable dynamic, real-time control of 3D avatars, ensuring smooth interaction between users and their avatars.
- Full Pipeline Development:** Employed PyQt4, Docker, and Godot to build an end-to-end avatar creation system, streamlining the entire avatar-making process from image input to final interactive model.

## RESEARCH INTERESTS

### Visual and Language Processing

- Computer Vision
- Natural Language Processing (NLP)

### AI and Automation

- Machine Learning
- Robotics

### Data Analysis

- Data Science
- Data Mining

## VOLUNTARY TEACHING EXPERIENCES

---

- **Robotics**, Instructor: Prof. Javanmardi Spring 2024  
Designed and graded assignments.
- **Embedded systems**, Instructor: Prof. Farbeh Spring 2023  
Designed and graded assignments, midterm and final exam.
- **Linear Algebra**, Instructor: Prof. Amir mazlaghani Spring 2022
  - Head TA of the course.
  - Designed and graded assignments. Also created a game for one of practical assignments.
- **Design of Algorithms**, Instructor: Prof. Shir Ali and Bagheri Spring 2022  
Designed and graded practical assignments

## EVENTS EXPERIENCES

---

- **Linux Fest** at Amirkabir University of Technology June 2022  
As a member of the Technical Staff
- **Game Craft** at Amirkabir University of Technology April 2022  
As a member of the Technical Staff
- **AAISS** (AmirKabir AI Student Summer) Jul, 2021 -- Aug, 2021  
As a member of the Technical Staff

## NOTABLE PROJECTS

---

### Artifact Removal

Preprints Available In ArXiv

- Official implementation of "A Conditional Inpainting Approach For End-to-End Artifact Removal In VTON and Pose Transfer". [Github Link](#)

### Text Into Image

ICLR Tiny Paper 2024

- Official implementation of "NO MORE BLAH-BLAH: EMBRACING REAL TEXT IN THE IMAGE SYNTHESIS WORLD". [Github Link](#)

### Robot Controller

Robotics Course, Prof. Javanmardi

- Controlled a robot using the ROS platform, employing PID controllers and image processing techniques. [Github Link](#)

### Image Classification

Computational Intelligence Course, Prof. Ebad Zadeh

- Developed an image classification model using a neural network architecture from scratch. [Github Link](#)

### Document Browser

Information Retrieval Course, Prof. Nick Abadi

- Designed and implemented a search engine tailored for textual documents. [Github Link](#)

## SKILLS

---

**Programming Languages** Python, Golang, C/C++, JavaScript, HTML, CSS, Kotlin

**Machine Learning Tools** PyTorch, Tensorflow, NumPy, OpenCV, Scikit-learn

**Game Engine** Unity, GoDoT

**Data management & Databases** MySQL, PostgreSQL, Redis

**Graphical Design Tools** Adobe Premiere, Adobe After Effects

**Frameworks & Programming Knowledge** Django, Fast API, WebSocket, PyQt, Docker, Arduino, ROS

**Miscellaneous** Linux, LATEX, Microsoft Office, Git

**Hobbies** Soccer, Chess, Hiking , Writing , Cooking

## LANGUAGES

---

### English

Professional proficiency

- Planned to take IELTS in Nov. 2024

### Persian

Native proficiency

### Japanese

Elementary proficiency

### ASL

Basic proficiency

## REFERENCES

---

### Prof. Maryam Amir mazlaghani

Associate Professor at Amirkabir University of Technology (Tehran Polytechnic)

Email: mazlaghani@aut.ac.ir

### Prof. Mahdi Javanmardi

Assistant Professor at Amirkabir University of Technology (Tehran Polytechnic)

Email: mjavan@aut.ac.ir

### Prof. Hamed Farbeh

Assistant Professor at Amirkabir University of Technology (Tehran Polytechnic)

Email: farbeh@aut.ac.ir

### Prof. Faezeh Gohari

Visiting Professor at Amirkabir University of Technology (Tehran Polytechnic)

Email: faezeh.gohari@gmail.com