Amin Fadaeinejad

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Summary

Research assistant at York University and a member of the Ubisoft R&D team (La Forge) specializing in using generative AI for computer vision/graphic applications with +3 years of research experience in academia and industry. Has worked on a generative pipeline for creating face models for NPC (non-playable characters), which reduces the time spent creating face models by a large gap.

Research Experience

Ubisoft Toronto — Toronto, Canada
Research and Development Intern — Jan 2023 – Present

- Designing a generative solution for generating face models for NPCs, reducing the time required for creating a face model by a large gap. [previous works]
- Programmed an automated pipeline for artifact removal from a face model, resulting in the elimination of human intervention and saving over 95% of processing time.
- Collaborated with a team of esteemed research scientists on multiple projects aimed at publishing papers at prestigious conferences (CVPR).

BioMotion Lab (York University) — Toronto, Canada
Research Assistant — Sep 2021 – Present

- Thesis: Real-Time Novel View Synthesis for Telecommunication Systems. [demo]

HARA AI (AI startup) — Tehran, Iran
Research Assistant — Sep 2019 – Aug 2020

- Collaborated with a team of deep learning/computer vision scientists to develop an Intelligent Traffic System (ITS).
- Developed a model architect using Pytorch that predicts the colour and model of a vehicle with 90.77% accuracy.
- Exported Pytorch models to OpenCV (C++) to reduce the execution time by 75%.

Research Intern — Jun 2019 – Sep 2019

- Collaborated with the natural language processing research team to develop and implement a speech-to-text model (Persian language) for understanding users' commands.
- Extracting features from audio signals using MFCC and MEL spectrogram (Librosa library).
- Creating a word library by cleaning and extracting words from approximately 5GB of newspaper text.

Projects

- Developed a web application focused on extracting podcast summaries and features, utilizing the OpenAI API. [link]
- Designed an **anomaly detection** network with autoencoders using **Pytorch**. [project page]
- Developed the Hierarchical Multi-Scale Attention Network for **semantic segmentation** (**Pytorch)**. [project page]
- Implemented an Image-to-Image Translation using Cycle-Consistent Adversarial Networks (**Pytorch)**[project page]
- Structured Human **Pose Estimation** with CNN(AlexNet) using **Pytorch** library. [project page]

Skills

- **Proficient**: Python (Pytorch, Tensorflow, Keras, Numpy, Pandas), Matlab, OpenAI API, Cohere API
- **Familiar:** C/C++, SQL, R

Honours and Awards

- Mitacs Accelerate Fellowship Recipient. [link]
- Vector Faculty Affiliate Researcher.
- Member of the Center for Vision Research (CVR) and Vision Science to Applications VISTA at York University.
- York Graduate Scholarship (Due to high GPA).

Education

York University — Toronto, Canada
Masters of Science in Electrical and Computer Engineering. GPA: 8.75/9 (A+); — Sep 2021 - Present

University of Tehran — Tehran, Iran
Bachelor of Science Electrical Engineering, GPA: 18.59/20; — Sep 2016 - Aug 2021
Minor in Computer Engineering, GPA: 17/20; — Sep 2018 - Jan 2021