Amir Masood Baghi

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Education

Uppsala University   *Uppsala, Sweden*
Master of Science In Computer Science   *Fall 2022 - Current*
- Passed with *distinction* in all completed courses
- Recipient of the Uppsala University International Scholarship Fund for the second year

Shiraz University   *Shiraz, Iran*
Bachelor's Program In Computer Engineering   *Fall 2018 - Fall 2022*
- Ranked *662nd* in the National Entrance Exam (among 144,000 applicants)
- Finished the program in four years with an *18.56/20 CGPA*
- Ranked *2nd* among the total of 81 students in my class

National Organization for Development of Exceptional Talents Asadpour High School   *Bandar Abbas, Iran*
Mathematics-Physics Diploma   *2014 - 2018*
Graduated with 19.28/20 CGPA.

Work Experience

Medrick Games   *Tehran, Iran (Remote)*
Unity Game Developer (Internship)   *Sept 2021 - Aug 2022*
- My team and I made *four casual/hyper-casual mobile games* among other activities
- Additionally participated in game design tasks, e.g. idea development and refinement, and marketing activities, e.g. creating one minute videos for our games

Academic Experience

Teaching Assistant   *Uppsala, Sweden*
Uppsala University   *Spring 2023 - Current*
- Assisted in the Human-Computer Interaction course.

Teaching Assistant, Various Courses   *Shiraz, Iran*
Shiraz University   *Fall 2019 - Spring 2022*
- Assisted in various courses including Database Design Principles, Operating Systems Lab, Advanced Programming, and more.

University Projects

Learning To Play Pong Using DQN   *Uppsala, Sweden*
Uppsala University - Reinforcement Learning Course   *Spring 2023*
A Deep Q-Network (DQN) was implemented, based on the Nature paper by Mnih et al. (2015), to learn and play the game of Pong (and most Atari games). The network was tested on Breakout successfully as well. Written in PyTorch.

Prototype For Semi-Autonomous Agricultural Harvesting Robots   *Uppsala, Sweden*
Uppsala University - Global Software Product Development Course   *Spring 2023*
A prototype for semi-autonomous agricultural harvesting robots was developed in an international team consisting of HUST (Hanoi) and UU (Uppsala) students. International collaboration, communication, and project management were the key concepts. Done using Lego EV3 Robots.

Various Classifiers and a DL Model For Lead Role Prediction In Films   *Uppsala, Sweden*
Uppsala University - Statistical Machine Learning Course   *Spring 2023*
Five types of classifiers and a neural network were developed with advanced hyper-tuning for prediction of the lead actor's gender based on a script's attributes. Got a *golden star* in the course. Done in Python using PyTorch, RayTune, and scikit-learn.

Raytracing, Environment, and Shadow Mapping For a Model Viewer   *Uppsala, Sweden*
Uppsala University - Computer Graphics Course   *Spring 2023*
Raytracing and environment and shadow mapping were added to an existing GLTF model viewer as the course's project and last assignment. The model viewer provided only a framework, and most of the basics of a renderer were added to it in the previous assignments. Done in C++, OpenGL, and GLSL.

Advanced Reversi AI
Uppsala University - Functional Programming I Course

Uppsala, Sweden

Fall 2022

The game of Reversi (Othello) and an advanced opponent AI were implemented in Haskell. Ranked *3rd* in a tournament against other AIs.

Aphrodite, A Covid-19 Detection Application
Shiraz University - Systems Analysis and Design Course

Shiraz, Iran

Fall 2021

An application was developed upon a pre-trained model (COVIDNet-CT) to accommodate COVID-19 detection for hospitals in Shiraz. A completely dockerized application, including telemetry for the model performance and monitoring. Python, Qt C++, Prometheus, Grafana, Node Exporter, and MySQL were utilized.

Various Game Development Mini-Projects
Shiraz University - Computer Games Design and Computer Graphics I Courses

Shiraz, Iran

Fall 2020 - Spring 2021

Main concepts in game development/graphics, such as skeletal animation (inverse kinematics), game engine development and design patterns, game physics, the render engine, and game metric analysis were implemented in these projects. All written in C++ using OpenGL/GLFW/GLUT.

3d Eight Queens
Shiraz University - Computer Graphics I Course

Shiraz, Iran

Fall 2020

As the course project, a program simulating the eight queens problem in 3D graphics was written in C++ using only OpenGL. Advanced lighting and surface materials were implemented and used to improve the graphics.

Modo, Bus Transportation App
I.D.E.A. Footsteps Contest

Shiraz, Iran

Summer 2020

For the I.D.E.A. Footsteps Contest, we were tasked with implementing a tracking system for the university's bus lines, including a mobile app to provide users with info on the scheduling. Developed with Flutter. *Ranked 1st in the contest*.

Teatro, Game Console In C
Shiraz University - Principles of Programming Course

Shiraz, Iran

Spring 2019

As the course project, our team implemented a game console to be able to render certain 2D games on PC, written in C. *Ranked 2nd in the course*.

Awards, Honors, And Certificates

2023	**International Scholarship Fund**, Uppsala University	*Uppsala, Sweden*
2022	**Dean's List**, Shiraz University	*Shiraz, Iran*
2022	**Ranked Second In My Class**, Shiraz University	*Shiraz, Iran*
2021	**TOEFL iBT (120/120)**, ETS	*Tehran, Iran*
2020	**Ranked First In The First Technical Footsteps Competition**, I.D.E.A Association	*Shiraz, Iran*
2019	**Completion Of A Full Program In English Language**, Iran Language Institute	*Shiraz, Iran*

Skills

Programming Languages	Python, Java, C/C++, C#, JavaScript, Golang, HTML/CSS, MiniZinc, Haskell, GLSL
Game Development	Unity, Game Design Patterns
Graphics and GPU Libraries	OpenGL, GLUT, GLFW, SDL, CUDA
Web/Application Frameworks	Spring, Django REST, Gin, Flutter, Vue, Vuetify, Qt, Bootstrap, Flask
Mathematical and ML Tools	PyTorch, NumPy, pandas, scikit-learn, MATLAB
Project Management	Agile Software Development (SCRUM), Git, Trello, JIRA
Miscellaneous	LaTeX , UML Diagarms, Docker, SQL
Soft Skills	Communication, Teamwork, Team Management, Resilience, Diligence

Interests

- Programming
- Artificial Intelligence
- Games and their development
- Philosophy
- Art, music, film
- Storytelling

Languages

English	Full Proficiency
Farsi	Native Proficiency
Swedish	Intermediate Proficiency

References available upon request.