

# Amir Hooshang Emamjomeh

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## EDUCATION

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### Master of Computer Engineering

major : artificial intelligence and robotics

Azad University at Tehran

Dissertation : Predicting stock prices using fuzzy system and neural network lstm, cnn

supervisors: Prof. Seyyed Hamid Ghafouri

Tehran, Iran

Sep. 2020-Present

### Bachelor of Manufacturing Engineering

major : machine tools

Azad University at Booin-Zahra

Booin-Zahra, Iran

Sep.2011-Feb. 2015

### Associate of Manufacturing

major : machine tools

Kerman Technical Institute

Kerman, Iran

Feb.2002-Oct. 2005

## SUMMARY

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I am an experienced professional with a passion for technology, known for my ability to troubleshoot everyday issues and solve complex tasks in the industry. As a machine learning researcher and game developer, I have honed my programming skills in C# and Python, with a deep understanding of syntax and logic required to execute commands effectively. Over the years, I have developed 3D modeling and animation skills to create and execute video games, providing users with an immersive gaming experience. In addition to my skills in programming, I also have significant experience in machine learning research and model selection, as well as feature engineering and data preprocessing. My work experience is a testament to my ability to bring my expertise in programming to the tech industry, and my passion for technology is reflected in my professional work.

## AWARDS

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| 1. Honorary diploma for the best playbook, Tehran Game Festival                      | Mar 2018 |
| 2. Winner of best commercial student game, National Computer Game Developer Students | Oct 2013 |
| 3. Third Place for best game, National Computer Game Developer Students              | Oct 2013 |
| 4. Winner of best adventure game, Tehran Digital Festival                            | 2011     |

## TECHNICAL SKILLS

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- **Programming Languages** : C#, Python, JavaScript
- **Web Development** : HTML, CSS, PHP
- **Frameworks** : ASP.NET Core , Bootstrap , TensorFlow , Skfuzzy , pandas , Numpy
- **Tools**: Visual Studio, Unity 3D, Wintermute, MySQL, MotionBuilder, Photoshop, After Effects, Premier , Rapidminer
- **3D Modeling**: Maya, 3ds Max, ZBrush, Marvelous Designer

## INDEPENDENT PROJECTS

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1. 2005 **Two Pines** :
  - Conceptualized and executed a short animation project for IRIB Kerman broadcast TV, including the modeling and animation of two pine trees and a realistic 3D background using the Maya software. As an individual contributor, this involved working with and receiving feedback from a team of directors and producers, ensuring that the final product met their expectations. This project demonstrated my ability to work independently and deliver high-quality animations within tight deadlines.
2. 2005 **Video Game for a TV Game Show** :
  - I designed, created, and produced a video game for a TV game show on IRIB Kerman broadcasting TV. Built with Game Maker, this project became my first solo game development effort, allowing me to experiment with and learn new tools and techniques. The game's 3D objects were modeled using Maya, while a simple user interface was designed using Photoshop. This project required careful management of resources and scheduling, as well as effective communication with colleagues and stakeholders, and demonstrated my ability to complete projects with a high degree of precision and professionalism.
3. 2006 **Roze Aval Madrese** :
  - I designed, developed, and produced a short animation for IRIB Kerman broadcasting TV. Built in Maya, this project involved creating 3D models, rigging, animation, texturing, and rendering, and required careful attention to detail and a high degree of technical proficiency. The project demonstrated my skills in creative storytelling, as well as my ability to work under tight deadlines and deliver high-quality work to audiences

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4. 2006 **Cars City** :
    - I designed, developed, and produced an animation using Maya and Renderman. This project involved creating detailed 3D models, rigging, and animation, as well as rendering using a specialized engine. The project demonstrated my skills in 3D modeling and animation, as well as my ability to work effectively with complex visual effects tools. This project was particularly challenging due to the large scale and scope of the animation, and required keen attention to detail and precise technical execution, as well as the ability to work in a team environment. Altogether, this project helped me refine my technical skills and further develop my eye for visual storytelling.
  5. 2007 **Demons** :
    - I designed, developed, and produced an animation project for IRIB Kerman broadcasting TV, utilizing Maya for 3D modeling, rigging, animation, and rendering. This project required careful attention to detail, a solid understanding of animation principles and technical proficiency in Maya. The project also required good collaboration with colleagues and producers on the team and working to tight deadlines. This project highlighted my ability to create highly technical and visually stunning animations, as well as my willingness to take on challenging projects
  6. 2009 **Detective Alavi** :
    - I designed, developed, and produced an adventure-style Windows PC video game from scratch using Wintermute game engine with C script. This project includes writing the story, creating and rigging the characters, developing animations and cutscenes using software such as Maya, Motion Builder, Unfold3D, 3DSMax, V-ray, After Effects, and Photoshop, all done independently and within tight deadlines. The game received several awards, including *Best Adventure Game* and *Best Commercial Student Game*, which showcase my technical and creative skills in programming and designing a game
  7. 2011 **The Thief and the Police** :
    - I designed, developed, and produced a video game, 'The Thief and the Police', using Unity3D. As my first project in Unity, I led the 3D modeling, rigging, and animation processes with Maya, creating realistic characters and environments. Through this project, I refined my skills in developing for a new game engine, showcasing my ability to work independently, effectively manage a project, and deliver a high-quality work environment.
  8. 2012 **Iro** :
    - I created a role-playing video game using Unity3D for mobile, named 'Iro'. I designed and developed the 3D models and animations using Maya and scripted the game using JavaScript. This project demonstrated my ability to design and build games for mobile devices, as well as my proficiency in working with multiple software tools, including Unity and Maya.
  9. 2012 **Adam Chobi** :
    - I designed and built a prototype for a video game using Unity3D, "Adam Chobi." This project required C# programming for gameplay and 3D modeling and animations for characters, weapons, and environments using Maya. The project highlighted my ability to work with game engines and develop games with engaging gameplay and visually appealing graphics.
  10. 2012 **Hakem** :
    - I designed and developed a prototype for a video game using Unity3D, 'Hakem.' This project involved scripting the game using C# programming, as well as designing and developing 3D models, rigging, and animations using Maya. This project demonstrated my ability to work with game engines and develop games with engaging gameplay and visually appealing graphics. By building a prototype, I was able to refine the game's core mechanics and design, ensuring that the final game would meet the intended gameplay experience and quality. This project also highlighted my proficiency in using Unity3D and Maya and demonstrated my ability to build games with high-quality graphics.
  11. 2013 **Foosball** :
    - I designed 3D models for a mobile video game named 'Foosball.' This project involved creating 3D models using Maya, which were then used to create engaging gameplay. This project demonstrated my ability to develop games for mobile devices, as well as my proficiency in using Maya to build the graphics. By developing 3D models, I was able to significantly contribute to the game's development, ensuring that the final product would meet the expectations of the players. This project also highlighted my ability to work with tight deadlines and meet the needs of a complex project. By creating the 3D models, I was able to play a key role in the game's development process, demonstrating my ability to create high-quality graphics that meet the standards of the gaming industry.
  12. 2013 **Hezar Sangar** :
    - I worked on a mobile video game named 'Hezar Sangar,' serving as the graphic manager for the project. This involved overseeing the team responsible for visual content, as well as coordinating with other members on development timelines, project goals, and design requirements. My responsibilities included graphic manager, as well as providing feedback and assistance to the team. This project demonstrated my ability to work in a collaborative environment, as well as my technical skills in managing and delivering high-quality visuals. By serving as the graphic manager, I was able to play a key role in the successful development of the game, ensuring that the final product would meet the expectations of the players.
  13. 2014 **Detectives Club** :
    - I developed a mobile adventure game named 'Detectives Club.' As the sole developer, I had the opportunity to design, write, and build every aspect of the game, including the story, characters, graphics, and functionality. Using a variety of tools and techniques, including Maya, Marvelous Designer, Zbrush, Unfold3d, and Motion Builder, I was able to create high-quality visuals and animations that engaged players. Additionally, I wrote the script for the game using C#, and implemented assetbundle technology to enable players to download and access various parts of the game. This project was well-received, winning several awards, including *Honorary Diploma for the best playbook at Tehran's 2017 game festival*. Through this project, I demonstrated my ability to take on a wide range of responsibilities and deliver a high-quality final product, while also showcasing my technical skills and understanding of the gaming industry.
  14. 2015 **Unity3D Asset Manager** :
    - I developed a Windows PC application named 'Unity3D Asset Manager,' which can arrange assets and extract a JSON file for use in Unity3D. By creating this tool, I was able to significantly streamline the process of building games in Unity, improving efficiency and reducing the time required to import assets. This project showcased my ability to work with Unity3D and use

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programming skills to build tools that make game development easier. While working on this project, I became proficient in programming in C# and building applications for Windows. This ability has allowed me to develop custom tools for my other projects, resulting in faster development cycles.

15. 2016 **Royal Office Runner :**

- I developed a mobile video game named 'Royal Office Runner' using Unity3D. This project involved creating the 3D models, rigging, and animations using Maya, and writing the script using C#. The game required players to run, jump, and slide through various obstacles and challenges, while collecting coins to unlock new characters. By creating a unique and engaging game with a variety of playable characters, I was able to demonstrate my ability to build games using Unity3D and Maya, as well as my knowledge of object-oriented programming using C#. This project highlights my passion and dedication to the gaming industry and my ability to deliver high-quality visuals and animations that engage players. I was proud to see this project receive positive reception and feedback from players.

16. 2016 **Ballz space : Bricks Breaker :**

- I developed a mobile video game named 'Ballz Space: Bricks Breaker' using Unity3D. This project involved creating the 3D graphics, implementing the game mechanics, and writing the script using C#. The game required players to swipe their fingers to throw spaceships and break bricks, with the goal of collecting items to create an endless chain of balls. By creating a addictive and engaging game that challenges players to improve their hand-eye coordination and reaction speed, I was able to demonstrate my proficiency in game development using Unity3D and C#. This project showcases my attention to detail, my ability to build games that are both challenging and enjoyable, and my passion for the gaming industry. Seeing the positive reception and feedback from players was extremely rewarding, and I am proud of the quality and success of this project.

17. 2016 **High-Score Server :**

- I developed a high score server that uses Telegram-API to identify and validate users. The server is designed to work with a MySQL server to read and write user data, and it uses a Telegram account to verify whether a user is valid. This project demonstrates my proficiency in building servers that work with Telegram-API and MySQL, as well as my knowledge of developing APIs. I was able to successfully design and build a server that functions as a middle-man between the game and the players, allowing them to connect to a shared database and compete against each other. This project showcases my ability to deliver high-quality software that meets the technical requirements of a project, and my passion for developing software that enhances the gaming experience for players.

18. 2016 **Nahar Khuran :**

- I developed a mobile video game named 'Nahar Khuran' that was built using Unity3D. The project involved creating the 3D graphics and animations using Maya, as well as writing the script using C# program language. 'Nahar Khuran' is a casual video game that can be played with one hand. By building this game, I was able to demonstrate my proficiency in creating mobile games and implementing 3D graphics using Unity3D and Maya, as well as my knowledge of game development in C#. This project allowed me to apply my skills in building a complete project from start to finish and deliver a high-quality game that appealed to players. This project also highlights my interest in creating games that appeal to a wide demographic, and my ability to design and deliver games that meet the technical requirements of a project.

19. 2017 **My Twitter Manager :**

- I developed a PC application named 'My Twitter Manager' using Twitter API's that allows users to manage their Twitter account. The application allows users to login to their Twitter account and access a suite of tools that facilitate the management of their Twitter profile and activity. It also enables users to search and analyze their Tweets and engage with their followers more effectively. By building this application, I was able to demonstrate my proficiency in Twitter API integration and my knowledge of building PC applications using API's. This project showcases my attention to detail, my ability to design and deliver applications that meet the technical requirements of a project.

20. 2017 **My Instagram Manager :**

- I developed a PC application named 'My Instagram Manager' using Instagram API's that allows users to manage their Instagram account. The application allows users to login to their Instagram account and access a suite of tools that facilitate the management of their Instagram profile and activity. It also enables users to search and analyze their content and engage with their followers more effectively. By building this application, I was able to demonstrate my proficiency in Instagram API integration and my knowledge of building PC applications using API's.

21. 2017 **My twitter manager v2 :**

- I developed a .NET WebAPI application named 'My Twitter Manager v2' that is an AI-powered tool for managing a Twitter account that uses Twitter API's and connects to a MySQL server. The application provides an intelligent way to manage a Twitter account, allowing users to automate actions such as following, commenting, retweeting, and replying to Tweets. The AI component of the application can search for relevant accounts, information, and descriptions, and then automatically engage with them on behalf of the user. By building this AI-powered application, I was able to demonstrate my proficiency in developing AI-powered applications, as well as my knowledge of web development using .NET WebAPI, Twitter API's, and MySQL.

22. 2017 **My Instagram manager v2 :**

- I developed a .NET WebAPI application named 'My Instagram Manager v2' that is an AI-powered tool for managing an Instagram account that uses Instagram API's and connects to a MySQL server. The application provides an intelligent way to manage an Instagram account, allowing users to automate actions such as following, commenting, visiting users' stories, and liking photos. The AI component of the application can search for relevant accounts and information, and then automatically engage with them on behalf of the user. By building this AI-powered application, I was able to demonstrate my proficiency in developing AI-powered applications, as well as my knowledge of web development using .NET WebAPI, Instagram API's, and MySQL.

23. 2017 **Manager Account :**

- I developed a mobile application named 'Manager Account' that is built using Unity3D and connects to 'My Instagram Manager v2' and 'My Twitter Manager v2'. The application provides users with a convenient way to manage their Instagram and Twitter accounts using intelligent AI-powered tools. It automates actions such as following, commenting, viewing users' stories, liking photos, and retweeting. By building this application, I was able to demonstrate my proficiency in developing mobile applications using Unity3D, as well as my knowledge of integrating AI-powered applications and API's.

24. 2017 **Sniper Mafia :**

- I developed a prototype of a video game named 'Sniper Mafia' that was built using Unity3D. The game entails taking control of a sniper and eliminating enemies on the map. It utilizes C# program language, and includes simple AI for the enemies. The game's goal is to successfully eliminate all enemies before being eliminated by an enemy sniper. By building this prototype, I was able to demonstrate my proficiency in game development using Unity3D, as well as my understanding of AI-enabled gaming.
25. 2018 **Labiaplasty Website :**
- I developed a website for the cosmetic surgery practice Labiaplasty Website. The website was built using WordPress, and utilizes three plugins and themes. The website's front-end was built using HTML, CSS, and PHP, while the back-end was powered by a MySQL database. I also created three plugins for the website that help determine the best theme, arrange SEO using Metadata, and handle the appointment booking process. By building this website, I was able to demonstrate my proficiency in web development using WordPress, my knowledge of front-end and back-end development technologies, my understanding of Metadata's impact on SEO, and my ability to build custom plugins for WordPress. This project showcases my ability to design and deliver professional websites for small businesses and practices that meet the technical requirements of the project, as well as my dedication to providing users with a user-friendly experience.
26. 2020 **Shabnam :**
- I developed a program named 'Shabnam' for Windows PC's built using C#. The program assists users in trading within the stock market, providing various tools and algorithms for action. The program features Indicators to provide recommendations, and displays real-time prices on a graph. It consists of three sub-applications, with one app fetching and storing current prices on a MySQL server, another processing data with indicators and storing it on a Web-API, and the main program using the API to retrieve data and display it on a graph. By developing this program, I was able to demonstrate my expertise in C# programming and database management technology, my ability to build advanced algorithms for trading, and my knowledge of Web-API integration for real-time data processing. This project showcases my dedication to using technology to enhance users' experiences and streamline their ability to participate in the stock market, as well as my ability to design complex systems that meet the technical requirements of a project.
27. 2020 **Shabnam Mobile Manager :**
- I developed a prototype application named 'Shabnam Mobile Manager' using Xamarin for IOS. This application integrates 'Shabnam', a stock trading program built using C# for Windows PC's, on IOS platform by connecting to a Web-API. The purpose of developing this prototype was to provide users with a user-friendly platform to trade stocks right from their IOS devices. By developing this application, I was able to demonstrate my proficiency in cross-platform mobile development using Xamarin, my understanding of Web-API integration for real-time data processing and my knowledge of stock trading algorithms. This project showcases my dedication to using technology to enhance users' experiences and streamline their ability to participate in the stock market, as well as my ability to design and build cross-platform applications that meet the technical requirements of a project.
28. 2021 **Research on Human Activity Recognition :**
- I conducted a research on Human Activity Recognition using machine learning and deep learning neural networks to predict human behavior. The research involved analyzing data from human activity recognition, including activities such as walking, running, standing, sitting, sleeping, and other movements, using a variety of machine learning models such as Convolutional Neural Networks (CNN), Long Short-Term Memory (LSTM), and Recurrent Neural Networks (RNN). The analysis was performed using Rapidminer, which showed 3D models for better visualization and interpretation of the data. Next, I assembled programs with Python and TensorFlow to simulate human behavior using artificial intelligence, which allowed for the prediction of human activity in complex scenarios. This project showcased my expertise in machine learning, deep learning, and artificial intelligence, as well as my dedication to exploring the cutting-edge technologies to push the boundaries of what's possible with AI. The results of the study provided new insights into human behavior analysis and may have implications for a variety of applications in human-computer interaction, robotics, and healthcare.
29. 2022 **Dissertation Predicting stock prices :**
- I developed a program named 'Rapidun' using Python that can predict pricing using machine learning. Specifically, the program implemented a variety of algorithms such as Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM), to help identify patterns in the market and provide accurate predictions for stock prices. The program also included a fuzzy system to evaluate and assign grades to each prediction, helping to determine the better options for users to trade based on the grades. The results of the program were analyzed and combined with other components of 'Shabnam' to provide a more comprehensive and effective solution for stock trading. By creating and integrating 'Rapidun', I was able to demonstrate my proficiency in developing advanced machine learning algorithms for price prediction and my understanding of real-world applications for these techniques. This project showcases my passion for exploring new applications for AI and machine learning, as well as my dedication to using technology to enhance the user experience in stock trading. It also highlights my ability to combine different cutting-edge technologies to create a powerful and effective solution that meets the specific needs of a project.
30. 2022 **Dissertation Predicting stock prices :**
- I am completing my dissertation 'Predict the Stock Prices' that analyzed data using machine learning neural networks such as Convolutional Neural Networks (CNN) and Long Short-Term Memory (LSTM) to predict stock prices. The research aimed to identify the best machine learning model for price prediction, considering various factors such as market volatility, trading volume, and economic indicators. To accomplish this, I assembled programs with Python and used libraries such as TensorFlow and Skfuzzy to implement machine learning algorithms. By analyzing data, developing a prediction model, and exploring different machine learning techniques, I was able to demonstrate my expertise in machine learning algorithms, data analysis, and programming in Python. The results of the study provide a comprehensive understanding of the effectiveness of different machine learning techniques for price prediction and may have implications for investment decision-making and risk management practices in the financial markets.
31. 2021 **Havan :**
- I developed a plugin for MetaTrader 5 built using Python that enables automated buying and selling of stocks. The plugin also fetches action data from Shabnam, providing real-time information on market trends and trading signals. This tool allows traders to execute trades quickly and effectively, without the need for manual intervention. As part of the project, I designed and implemented the plugin's user interface, ensuring ease of use for traders seeking to streamline their trading process. The plugin's

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functionality includes support for various stock market data sources, allowing traders to optimize their trading strategies in real-time.

32. 2021 **Havan v2 :**

- I developed an AI-driven trading system using Python that incorporates machine learning algorithms to analyze market trends and predict stock prices. The system provides users with a comprehensive portfolio management tool, enabling them to automate buying and selling decisions and optimize investment strategies. Havan v2 is currently in development, incorporating key technical indicators and support resistance lines to improve trade outcomes. The platform is built using the latest version of Python, incorporating deep learning libraries and other cutting-edge technologies for precise and up-to-date trading decisions. Havan v2 is a state-of-the-art algorithmic trading system that has the potential to transform the way traders approach the stock market.

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## RESEARCHER EXPERIENCE

### **Azad University at Tehran**

Human activity recognition

Tehran,  
Nov. 2020 – 2021

Iran

- I analyzed data from human activity recognition using artificial intelligence techniques such as Convolutional Neural Networks (CNNs), Long Short-Term Memory (LSTMs), and Recurrent Neural Networks (RNNs) to predict behavior. I built programs in Python using TensorFlow to simulate human behavior using artificial intelligence, which allowed me to recognize and identify the actions performed by individuals. This research involved understanding the nuances of human behavior, which helped me develop a deeper understanding of AI and its potential applications.

### **Azad University at Tehran**

Predicting stock prices using fuzzy system and neural network lstm, cnn

Tehran,  
Nov. 2021 – Present

Iran

- My thesis research at university involved the development of a program to predict the price of stocks in the market using neural networks. I incorporated a combination of Convolutional Neural Networks (CNNs) and Long Short-Term Memory (LSTMs) and the Anfis system to grade arrangements and determine the optimal positioning of the stocks. I built the program using Python and TensorFlow, a popular library for building neural networks and deep learning models. Through this experience, I was able to analyze market data and forecast future trends, thereby enabling me to gain a deeper understanding of the complexities of the stock market and the potential of AI-driven trading in predicting price fluctuations.

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## HONORS

- Arbitrator of Hobby and Game Design Dept. of the First National Tax Culture Festival in Iran
- Arbitrator of the 1<sup>st</sup> course of the Iranian Independent Game Developers , Oct 2014
- Arbitrator of the 4th course of the Iranian Independent Game Developers
- 3rd Place in the Iran Game Developer's Cup , May 2014
- Presidential Honors at Azad University, Dec 2013
- Honors in the Conference of Glorifying Superior Research in Bouein Zahra, Dec 2013

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## MEMBERSHIPS

- Iran Video Games Festival Academy
- Official judge for Iranian Independent Game Developers
- Official judge for Hobby and Game Design Dept. in Iran