

# Samaneh Shirinnejad

✉ samaneh.shirinnejad@gmail.com | 🌐 Website | 🔗 LinkedIn | 🐙 GitHub | 📄 Google Scholar

## Education

### B.Sc. in Computer (Hardware) Engineering

September 2012 - December 2016

Jundi Shapur University of Technology

Dezful, Iran

- **Capstone Topic:** Design and Development of a VR Game with Motion Sensor Integration for Mobile Platforms using Unity and Google Cardboard
- **GPA:** 145 credits program with GPA of 17.51/20. GPA of the last two years is (3.81 / 4.00)
- **Selected Courses:** Advanced Programming, Algorithm Design, Data Structures, Artificial Intelligence, Data Transmission, Discrete Structures, Internet Engineering

## Research Interests

- Machine Learning
- Deep Learning
- Natural Language Processing
- UI/UX Design
- Interactive Systems
- AI in Healthcare & Education

## Recent Publications

C=Conference, J=Journal, P=In Press, S=Submitted, U=Under Review

Find me at: 📄 Google Scholar | 🆔 ORCID

- [J.4] **Navigating the Canadian Renewable Energy Landscape through Bibliometric and Machine Learning Insights.**  
Samaneh Shirinnejad, & Davoud Ghahremanlou.  
*International Journal of Global Warming*, 37, 2025. [DOI]
- [S.1] **Machine Learning for Enhanced Bibliometric Analysis of Renewable Energy Research Trends in Canada.**  
Samaneh Shirinnejad, & Davoud Ghahremanlou.  
Submitted to *International Energy Journal*, 2025.
- [J.3] **Optimizing Hybrid Energy Solutions for Enhanced Energy Resilience and Sustainability in Repulse Bay Using HOMER Pro.**  
A. Ashouri Vajari, S. Kotian, S. Shirinnejad, et al.  
*Journal of Green Economy and Low-Carbon Development*, 3(2), 69–81, 2024. [DOI]
- [J.2] **Enhancing Sustainability in Hopedale, Newfoundland and Labrador, Through Hybrid Microgrid System Design.**  
A. Maliat, S. Kotian, S. Shirinnejad, et al.  
*Power Engineering and Engineering Thermophysics*, 3(1), 58–76, 2024. [DOI]
- [J.1] **Optimizing Hybrid Energy Systems for Sustainable Development at the Canadian Arctic: A Case Study for Arviat.**  
A. Ashouri Vajari, S. Kotian, S. Shirinnejad, et al.  
*Journal of Urban Development and Management*, 3(3), 150–163, 2024. [DOI]

## Experience

### Upwork 🌐

April 2023 - Present

Freelance Data Scientist & Frontend Developer

Remote

- Delivered full-stack solutions in data analytics, frontend development, and UI/UX design for dashboards and interactive web tools.
- Designed clean, responsive interfaces with a focus on usability and accessibility across projects involving business intelligence, GIS, and social media analytics.
- Built custom machine learning models and visualization tools to support client decision-making.

### Amoun Computer Institute

2020 - 2023

Computer Science Tutor

Andimeshk, Iran

- Tutored students in programming, data structures, and algorithms (Python, C++) and assisted with project work and exam prep.

### Bartar Language School

2016 - 2020

English Instructor

Dezful, Iran

- Taught ESL skills and led interactive workshops to improve student fluency and engagement.

## Selected Projects

---

### AirSpell: AI-Powered Air-Writing for Early Literacy

July 2025

Tools: React, TensorFlow.js, HTML5 Canvas, JavaScript



- Designed a React + TensorFlow.js app for spelling practice via real-time hand tracking and air-writing.
- Addresses literacy and motor skill development through playful, embodied interaction.
- Supports adaptive feedback, undo/redo controls, and accessibility for diverse learners, with future plans to add scoring and gamification.

### Smart Text Enhancer

May 2025

Tools: JavaScript, Chrome Extensions, OpenAI API



- Built a GPT-3.5-powered Chrome extension for simplifying, translating, and rephrasing text directly on webpages.
- Enhances comprehension and digital literacy by adapting content to reading level, language, and tone.
- Offers customizable reading aids (e.g., dyslexia font, font size), supporting personalized engagement.

### Stock Market Prediction Analysis

October 2024

Tools: Python, Pandas, Scikit-learn, TensorFlow, LSTM, Random Forest



- Predicted significant stock price movements using a Random Forest model, achieving an F1 score of 82%.
- Utilized an LSTM network to forecast daily closing prices, reaching an MSE of 0.004 on the test dataset.

### Personal Portfolio Website

August 2024

Tools: Next.js, React, Tailwind CSS, JavaScript, GitHub Pages



- Designed and developed a responsive personal portfolio website showcasing my skills and projects, with a modern, clean, and interactive UI.
- Built with Next.js and React for performance, SEO, and component-based architecture; styled with Tailwind CSS.

### Insights into ChatGPT Research

May 2023

Tools: Python, BeautifulSoup, Google Scholar API, Pandas, NLTK, spaCy, LDA



- Applied web scraping, NLP preprocessing, and machine learning (LDA) to analyze research trends and key topics in ChatGPT studies.

### Social Media Analysis of ChatGPT (Twitter and Reddit)

April 2022

Tools: Python, Pandas, NLTK, spaCy, LDA



- Scraped and analyzed Twitter and Reddit data on ChatGPT, using sentiment analysis and topic modeling to uncover community insights.

## Honors and Awards

---

### Dean's List

Multiple Semesters (Fall 2014, Winter 2015, Fall 2015, Winter 2016)

Jundi Shapur University of Technology

- Recognized for consistent high academic performance over multiple semesters.
- Demonstrated exceptional academic dedication and achievement, placing in the top 10% of the class.

### Annual JSU Programming Contest Winner

September 2015

Jundi Shapur University of Technology

- Secured first place in the annual JSU Programming Contest, specializing in algorithm design and implementation using C++.
- Excelled in solving complex problems under rigorous time constraints, demonstrating advanced proficiency in C++.
- Outperformed other competitors, showcasing superior competitive programming skills.
- Received a certificate and a recognition plaque for outstanding performance.

## Skills

---

**Languages:** English (IELTS Academic - Overall Band Score: 8.5), Persian (Native)

**Programming Languages:** Python, R, C++, C#, SQL

**Virtual Reality Development:** Unity3D, Unreal Engine, VR SDKs

**Web Technologies:** HTML, CSS, JavaScript, React

**Machine Learning:** TensorFlow, Scikit-learn, Keras, PyTorch

**Data Science:** R, Julia, Python scientific stack (pandas, numpy, etc.), relational databases (MySQL, Microsoft SQL Server)