Kian Razavi Satvati

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Profile

Machine learning researcher and developer with experience in generative AI, applied ML research, and full-stack technical solution development. Proficient in machine learning models using TensorFlow, PyTorch, JAX, and Scikit-learn, with hands-on experience in game development, cloud platforms, and modern software frameworks. Passionate about scalable AI solutions, interdisciplinary collaboration, and creating intelligent and interactive systems.

Education

M.Sc. in Computing Science, University of Alberta, Canada 2022–2025
B.Sc. in Computer Engineering, Shahid Beheshti University, Tehran, Iran 2017–2022

Technical Skills

- **Programming:** Python (TensorFlow, PyTorch, JAX, Numpy, Pandas, Scikit-learn), C#, Java, C/C++, React.js
- **Tools:** Linux, Git, Docker, HuggingFace, AWS basics, SQL, FastAPI, Unity, Blender
- **Skills:** Data Management, Applied Research, ML Systems Development, Game Development, Full-Stack Development

Experience

Research Assistant, University of Alberta 2023.05–Present
- Designed and implemented VAE-based semi-supervised models for procedural content generation via machine learning (PCGML) in video games.
- Demonstrated that the proposed approach outperformed prior state-of-the-art (SOTA) methods using both quantitative and qualitative metrics commonly used in PCGML.
- Managed a dataset of 2M+ samples; built scalable data pipelines using TensorFlow and PyTorch.
- Co-authored a journal paper currently under review at IEEE Transactions on Games.

Machine Learning Engineer Intern, Rahnema College 2021.05–2021.07
- Completed a 9-week ML engineering program applying machine learning principles to real-world data.
- Worked with proprietary datasets under confidentiality agreements.

Teaching Assistant, University of Alberta & Shahid Beheshti University 2019.01–2024.12
- Supported 200+ students across 9 courses, leading labs, lectures, and workshops on computing science and AI.
- Assisted with curriculum development, assessments, and fostering inclusive learning environments.

Projects

FireworkJobs – Developer 2025–Ongoing
- Created an LLM-powered service for personalized resume and cover letter generation based on real-time job market data.

OnlyFollow_NoExplore – Developer 2024–Ongoing
- Designed and prototyped a browser extension aimed at improving cyber hygiene by marking or filtering algorithmically suggested content on platforms such as Instagram and YouTube.
- Part of a broader initiative to promote intentional browsing behavior and digital well-being.

Indie Game Development Projects – Game Developer 2020–2022
- Designed and developed multiple mini-games and a B.Sc. thesis project (*Defending Dragons*), a 2D

local multiplayer strategy game built in Unity.
- Focused on promoting meaningful interaction across generations through game mechanics.
- Implemented C# scripting for gameplay mechanics, UI elements, and multiplayer interactions, emphasizing rapid prototyping and user experience.

Garden of AIden – Summer School Project 2021
- Collaborated in a 6-person team to develop an AI-driven tool using GANs for real-time vegetation generation.
- Awarded **Best Project** among 11 participating teams at the 3rd International Summer School on AI and Games.

Volunteering

UR2PhD Graduate Student Mentoring, University of Alberta 2024.09–2024.12
- Mentored two undergraduate students through a full ML research cycle, from ideation to report writing.

Workshop Facilitation, Alberta Machine Intelligence Institute (Amii) 2024.09–2024.12
- Facilitated 8 ML workshops for industry professionals, averaging 25 participants per session.

Program Delivery Support, Alberta Machine Intelligence Institute (Amii) 2024.03–2024.05
- Delivered AI learning sessions for K-12 students and mentored GovTech Hackathon participants.

Publications

- **Under Review**: Journal article on procedural content generation via machine learning, submitted to *IEEE Transactions on Games (TOG)*.

- K. Razavi Satvati, M. Vahidi-Asl, "Looking at Intergenerational Game Design through the Lens of Game Genres," presented at the *Computer Games: Challenges and Opportunities Conference*, Isfahan, Iran, Feb. 2021.

Awards and Certifications

- Graduate Student Teaching Award, University of Alberta 2025.04
- UR2PhD Graduate Student Mentor Training Certification, Computing Research Association 2025.01
- Graduate Student Teaching Award, University of Alberta 2024.04
- UI/UX Design Program Certification, Shahid Beheshti University 2019.05