

Amirreza Sokhankhosh

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HIGHLIGHT OF QUALIFICATIONS

- **Generative AI & LLMs:** Proven expertise in developing and deploying AI-based solutions, including an **AI-powered grading system** using **GPT-4** that reduced grading time by **50%** while ensuring high-quality responses through continuous feedback loops.
- **Machine Learning Engineering:** Deep understanding of **ML Ops** best practices, with experience in optimizing model accuracy and employing advanced techniques in prompt engineering and **LangChain** workflows for dynamic AI applications.
- **Cloud & DevOps:** Hands-on experience in leveraging **Azure**, including transformer-based models and deployment of APIs to **Azure Functions**, enhancing scalability and performance of AI solutions that address complex business challenges.
- **Backend Development & APIs:** Expertise in designing and implementing **RESTful APIs** and microservices architecture using **Django**, facilitating seamless integration with front-end teams and enhancing overall application responsiveness by **30%**.
- **NLP & Computer Vision:** Developed an intelligent paper summarization system utilizing **NLP** and **computer vision** techniques, improving processing efficiency and enabling advanced data synthesis from academic sources.
- **Collaboration & Leadership:** Demonstrated ability to lead cross-functional teams and translate complex technical requirements into actionable insights, supporting over **300 students** as a Lead Teaching Assistant while enhancing their understanding of AI concepts.
- **Agile & Project Management:** Effective contributor in agile environments, employing **Atlassian tools** for task management and enhancing workflow efficiency across projects, ensuring timely delivery of high-impact AI solutions.

EXPERIENCE

University of Manitoba

Graduate Research Assistant

Sep 2023 – Jul 2025

Winnipeg, Manitoba, Canada

- Designed and developed **novel distributed AI architectures** addressing critical challenges in **distributed learning**, successfully improving **model integrity and fairness**.
- Implemented a **blockchain consensus mechanism** (PoCL) that reduced communication overhead by **85.2%**, enhancing energy efficiency in federated learning.
- Authored research published in top-tier IEEE venues, demonstrating robust experience in **technical communication** and **problem solving** for complex AI technologies.
- Utilized **TensorFlow** and **PyTorch** for AI model development while ensuring adherence to best practices in **ML Ops**.
- Collaborated with diverse teams to **optimize model accuracy** through efficient prompt refinements and integrating cutting-edge technologies.

Bobo

Full-stack Developer Intern

May 2024 – Aug 2024

Winnipeg, Manitoba, Canada

- Accelerated product development by **designing and implementing RESTful APIs** using **Supabase** and **PostgreSQL**, enhancing backend functionality.
- Automated data integration by developing a **Python script** to convert CSV data into executable SQL, demonstrating strong **software development skills**.
- Ensured seamless full-stack integration by collaborating closely with the **frontend team**, aligning API specifications with user interface requirements.
- Contributed to agile workflow efficiency through active use of the **Atlassian suite** (Jira, Confluence) for task management.

K. N. Toosi University of Technology

Lead Teaching Assistant

Jan 2021 – Jan 2023

- Supported over **300 undergraduate students** across various technical subjects, fostering a strong foundation in complex concepts and **problem-solving strategies**.
- Designed and developed engaging lectures and practical coding projects, significantly enhancing student comprehension and **hands-on application** of AI and programming concepts.
- Provided specialized support in areas like algorithm implementation and system architecture, bridging theoretical knowledge with practical problem-solving.

K. N. Toosi University of Technology

Jun 2021 – Aug 2022

Research Assistant

- Led an undergraduate research team on analytical studies, improving data analysis methodologies and highlighting significant findings through advanced **causal inference techniques**.
- Executed data cleaning of over **10GB of raw data** from government sources, ensuring high data integrity for advanced analysis.
- Produced detailed analytical reports quantifying subsidy biases, demonstrating strong **analytical skills** and capability to translate complex requirements into actionable insights.

PROJECTS

MarkMate | *React, Django, GPT-4, LangChain, Python* | [Code](#)

- Developed an **AI-powered grading system** using **GPT-4** to automate the evaluation of assignments with customizable rubrics, significantly reducing grading time by **50%**.
- Designed a scalable **microservices architecture** integrating **Django REST API** with a **Flask** microservice for LLM processing, enhancing system modularity and reusability.
- Implemented feedback loops to continuously improve the **response quality** of the grading system based on user input, leading to a **30% increase** in user satisfaction ratings.

Aria | *Python, OpenAI GPT-4o-mini, LangChain, Azure, LaTeX* | [Code](#)

- Developed an intelligent resume generator leveraging **OpenAI GPT-4o-mini** for dynamic content creation that accurately aligns with job postings.
- Implemented **LangChain** workflows to optimize document generation processes, significantly enhancing responsiveness to job description nuances.
- Achieved a **30% reduction** in application processing time through automation and tailored document production, increasing candidate engagement by **15%**.

Paper Summarizer | *Python, Flask, Ollama, LLaVA, PyTorch* | [Code](#)

- Developed an intelligent academic paper summarization system utilizing **natural language processing** and **computer vision** techniques.
- Implemented a **Flask-based API** for text summarization and figure analysis, enhancing document processing efficiency by **30%**.
- Enabled multi-modal analysis supporting **PDF extraction**, resulting in comprehensive academic summaries that improved user satisfaction through better information retrieval.

Mini Task Manager | *Django, Python, React, Material-UI* | [Code](#)

- Developed a **full-stack task management application** that improved task organization efficiency by **40%** for users, leveraging best practices for **clean architecture** and responsive design.
- Implemented secure **token-based authentication** using **Django REST Framework**, ensuring seamless user experience and high **data security**.
- Enhanced the application's responsiveness by utilizing **Material-UI**, resulting in an increase in user engagement and a **30% reduction** in loading times across devices.

EDUCATION

University of Manitoba

Sep 2023 – Aug 2025

Master of Science in Computer Science (GPA: 4.4 / 4.5)

Winnipeg, Canada

- **Relevant Coursework:** Security & Privacy, Deep Generative Modeling, Blockchain & Distributed Systems: A+

K.N. Toosi University of Technology

Sep 2018 – Feb 2023

Bachelor of Science in Computer Engineering

TECHNICAL SKILLS

AI / Machine Learning: TensorFlow, PyTorch, LangChain, Scikit-learn, Transformers

Languages: Python, JavaScript, TypeScript

Cloud & DevOps: Docker, Git, GitHub, CI/CD

Databases: PostgreSQL, MongoDB, MySQL

Web Frameworks: *Back-end:* Django, Flask, Express.JS. *Front-end:* React

Tools & Methodologies: Jira, Confluence, Agile, Scrum