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Dear Hiring Manager,

I'm Aiden, a Computer Science graduate with AI specialization at Lakehead University. I graduated Spring 2024, with my thesis on AI, NLP, and Machine Learning. Specifically, my work focused on text summarization and unsupervised learning. My first paper on the subject is published at NAACL 2024, and my second paper is about to be submitted for JAIR. I'm currently working on intershipt until mid August.

In my academic pursuits, I have gained experience in using and fine-tuning language models such as BERT and LLAMA 2. My proficiency extends to Python and machine learning libraries, such as PyTorch, scikit-learn, Pandas, Tensorflow, and Huggingface.

Before my graduate studies, I was a researcher at the SBU NLP lab and an undergraduate student at the University of Tehran, where I did research into text generation for low-resource languages using GPT-2 and image generation with GAN networks respectively. Beyond my academic background, I also have experience as a project manager and software engineer intern.

Thank you for your consideration,

Aiden

Aiden (Mohammad) Khosrvani

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ABOUT ME & SKILLS

About Me:

I'm Aiden, a Computer Science graduate researcher, specializing in natural language processing (NLP), deep learning, machine learning, and large language models (LLMs). Prior to my research in AI, I worked as a project manager and web developer. I'm currently looking forward to transitioning into a artificial intelligence and software developer role.

Skills:

- **Programming Languages:** Python, C#, JavaScript, Java, C++
- **Frameworks and Libraries:** TensorFlow, PyTorch, Huggingface, Numpy, Scikit-Learn, Langchain, Django, ASP.NET Core, React, Hadoop, SQL, NoSQL, MongoDB, NLTK, SpaCy, Pandas, OpenCV
- **DevOps:** Linux, Git, CI/CD, Docker, AWS, SageMaker, SLURM
- **Professional:** Data Science, Machine Learning, NLP, Large Language Model (LLM), Project Management, Agile, Blockchain

EDUCATION

LAKEHEAD UNIVERSITY

Master of Computer Science with Specialization in AI
Funded by Vector Institute & Computer Science Dept.
GPA: 92/100

Sep 2022 - Mar 2024

UNIVERSITY OF TEHRAN

Bachelor of Computer Science
GPA: 3.9/4

Sep 2016 - Jul 2020

EXPERIENCES

- **AI Engineer at Border Giant Inc.** May 2024 - Jul 2024
 - **Developing and integrating** a virtual assistant for automatic classification of goods for import/export processes.
 - Classification of over **10,000 classes** with high accuracy using OpenAI platform, **RAG**, and **few-shot classification**.
 - Creating and deploying an HS code classification **chatbot** for customers.
- **AI and NLP Researcher at Lakehead University** Sep 2022 - May 2024
 - Proposing a novel approach for **generating and evaluating** summaries of **online debates** using **deep learning** and **machine learning** techniques that **outperforms** previous **state-of-the-art** (Published at NAACL 2024)
 - Using **sentence embedding** and **clustering** techniques for generation
 - **Fine-tuning** pre-trained language models such as **BERT** and **RoBERTa** for evaluation
 - **Zero-shot** and **few-shot prompt engineering** of LLMs such as **LLAMA 2 70B** for evaluation and paraphrasing
 - Surveying previous approaches for **text summarization** using **unsupervised learning** techniques
- **Teacher Assistant at Lakehead University** Sep 2022 - Mar 2024
 - Teaching, marking exams and assignments, and holding office hours
 - Courses: Artificial Intelligence, Obeject Oriented Programming, Functional Programming, Database
- **Project Manager at Bitium Agency** Jan 2022 - July 2022
 - Bitium Agency specializes in **blockchain**, **smart-contract**, and **web** development for applications ranging from thousands to over a million dollars, such as NFT collections, Marketplaces, and DAOs.
 - Managing **client relationship** and **communications** between clients and development teams
 - **Documenting** client requirements and requests for each project and developing **project road map**
 - **Overseeing** development teams, including back-end, front-end, smart contract, design, and QA, through **Agile** methodology
- **Web Developer Intern at SIB** Mar 2020 - Dec 2020
 - Designing, developing, and deploying web applications and back-end **REST API** services
 - Front and back-end development in different languages and frameworks including **Python**, **C#**, and **JavaScript**
 - Implementing **booking and reservation systems** and REST APIs with admin panel for management using **MySQL** and **NoSQL** databases

HONORS AND AWARDS

- Awarded as a winner of **CANIS Hackathon** on fake news detection 2023
- **Vector Institute** Scholarship recipient for research in artificial intelligence 2022 -2023

PUBLICATIONS

- *Enhancing Key Point Generation via Clustering: Prioritizing Exhaustiveness and Introducing an Automatic Coverage Evaluation Metric*
 - Published at ACL (NAACL 2024)
- *Recent Trends in Unsupervised Summarization*
 - To be submitted for JAIR in 2024. Previous draft: <https://arxiv.org/abs/2305.11231>

PROJECTS

- *Customer Service Chatbot* 2024
 - Web-based customer service chatbot with retrieval augmented generation (RAG) for answering user queries.
 - Work in progress.
 - Stack: Langchain, LLAMA 2, Mixtral, Huggingface, SBERT, Chroma, Django, ReactJS
- *Argument and stance summarization (Master's Thesis)* 2022-2023
 - Summarizing a corpus of arguments on a topic from opposing stances into a bullet-point style list. [Available on Github]
 - Using deep learning, machine learning, clustering, embedding, unsupervised learning, fine-tuning language models
 - Stack: SBERT, BERT, Roberta, ChatGPT, LLAMA 2, Huggingface
- *Open-ended text generation* 2021
 - Training natural language understanding and generation (NLU and NLG) models for short story generation
 - Collecting and cleaning textual data from internet for dataset creation (Web Scraping)
 - Fine-tuning LLMs for low resource languages
 - Stack: GPT-2, BERT, Huggingface, Selenium
- *Pixel-art generator (Bachelor's Thesis)* 2020
 - Training and fine-tuning **GAN**-based models for generating pixel-art images [Available on Github]
 - Using **DCGAN** and Nvidia's **StyleGAN**, and image processing

VOLUNTEER EXPERIENCES

- *President of LICA club at Lakehead University* Sep 2022 - Aug 2024
 - Organizing events and managing finances