

Zikun Fu

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🔗 About Zikun

Summary

Graduate student in Information Science with over 4 years of experience in object-oriented programming, focusing on machine learning, databases, and natural language processing. Inquisitive and driven, with a passion for bridging technology with human understanding.

Skills

System Administration

- Proficient in Linux-based environments (Ubuntu)
- Experience with Docker and Docker Compose for containerization and deployment
- Automation scripting with Python and Bash

AI/ML and Data Science Expertise

- Frameworks: TensorFlow, PyTorch, Hugging Face Transformers
- Experience: Fine-tuning, model evaluation, and embedding-based semantic search
- Tools: Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn
- Applied AI/ML techniques to improve performance and streamline processes

Programming & Database Management

- Languages: Proficient in Python, SQL, Java
- Tools: SQL, PostgreSQL, MySQL, MongoDB
- Expertise: Database design, query optimization

Collaboration & Version Control

- Tools: Git, GitHub
- Methodologies: Agile (Scrum, Kanban), Test-driven development (TDD), CI/CD practices
- Strong teamwork and communication skills

Other Skills

- Strong problem-solving abilities and algorithmic thinking
- Proficient in Jupyter Notebook, VSCode, and Linux environments
- Self-motivated and proactive in identifying and solving technical challenges

Education

Ontario Tech University

Bachelor of Science (Hons) Computer Science, Specialization: Data Science

Sept 2019 - April 2023

- GPA: 3.86/4.3
- Achievements: President's List, Dean's List (3 consecutive years)
- Diploma: [View Here](#) 🔗

Ontario Tech University

Master of Information Science


Exp. Graduation: 2025

- Focus: Machine Learning, Database, Natural Language Processing
- GPA: 4.24/4.3

Projects

GreX.eilab.ca Migration Project


2024 Winter

Lead Developer ([Website](#) )

- Planned the development strategy, timeline, and technical requirements for migrating grex.eilab.ca to a new application platform
- Designed a comprehensive roadmap to facilitate the migration, focusing on maintaining functional parity and improving scalability
- Currently working on the migration and deployment process
- Ensuring high availability and streamlined functionality in the new platform while maintaining data integrity and user experience

Closed Domain Named Entity Recognition


2024 Fall

Master's Thesis ([Abstract](#) )

- Developed a pipeline to convert text-to-SQL datasets (BIRD, Spider) into benchmarks for Closed-Domain Named Entity Recognition (CD-NER)
- Enhanced domain-specific NER by creating evaluation resources for large, fixed entity pools
- Presented findings at Ontario Database Day 2024 (University of Waterloo), fostering discussions on advancing database-grounded NLP

Semantic Search Using Embedding Models

2024 Spring

Co-principal Investigator ([Github](#) )

- Evaluated state-of-the-art embedding models with domain-specific instructions for improved semantic representation
- Utilized advanced techniques to fine-tune models, resulting in improved accuracy and relevance in search results
- Gained proficiency in embedding techniques and their application in real-world scenarios

Work Experience

GREX Redevelopment Project Manager

Dec 2024 - Apr 2025

The Educational Informatics Laboratory (EILab), OTU

- Leading migration of the GREX architecture from Symfony/Laravel to a Dockerized environment using LimeSurvey and MySQL
- Configured and maintained Linux-based VMs (DigitalOcean Droplet) for testing and deployment using Docker Compose
- Implementing a unified, containerized system architecture to enhance consistency and reduce maintenance complexity
- Collaborating with stakeholders to define system requirements and achieve functional parity with the existing GREX platform

Research Associate

Jan 2024 - Present

Ontario Tech University

- Supporting supervisor with various research projects, including closed-domain named entity recognition and semantic search
- Investigating embedding model performance with domain-specific instructions
- Assisting in designing experimental setups, data collection, and evaluation

Volunteer

TED Translators

2018

Volunteer in Subtitle Translation

- Translated and edited subtitles for TED and TEDx talks, published on TED.com
- Developed strong collaboration and adaptation skills through online teamwork