

Jacob Rei Lansang

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OBJECTIVE STATEMENT

To secure a Data Engineering job to develop my passion for music and to work on unique forward-thinking technologies

WORK EXPERIENCE

Python Developer Intern (contract position)

May 2023 - August 2023

TCG Machines, Calgary, AB

- Developed and integrated a **computer vision**-based application feature to the PhysBatch-9000 Trading Card Sorter using **Python** and **OpenCV** to identify icons for Trading Cards categorization
- Designed and tested **machine learning models** for Magic: The Gathering card feature identification, involving **data collection**, filtering, and **data preprocessing**. Utilized pre-trained Tensorflow models and created custom models for card categorization
- Independently integrated and tested features and **ML models** with guidance from the Lead Data Scientist, resulting in significantly improved identification of cards

Associate Machine Learning Developer (contract position)

September 2022 - December 2022

AltaML, Calgary, AB

- Planned, integrated, and released **machine learning models** to monitor the behaviour of wind turbines using SCADA data. **Normal behaviour models** were used to prevent the suboptimal performance of wind turbines and prevent a loss of profits
- Developed models in **Microsoft Azure** using **Python** and **TensorFlow**. Made dashboards using **Power BI** to summarize wind turbine data and show modelling predictions. Analyzed data using **modern EDA techniques** on large datasets
- Presented findings and results bi-weekly to subject matter experts to increase domain knowledge and report new progress
- Collaborated with six developers using Git and **GitHub** to coordinate work.
- Competed in the first Microsoft x AltaML Hackathon, accomplishing second place by building an AI medical app in 48 hours with a team of four developers

RELEVANT SKILLS

- Technical: **Object-oriented programming**, agile development, full-stack development, **data engineering**, **machine learning**, **front-end and back-end testing**, dashboarding
- Software: C, C++, Java, **Python**
- Tools: **TensorFlow**, Power BI, **Microsoft Azure Machine Learning Studio**, **Kubeflow**, **MySQL**, **GitHub**

SOFT SKILLS

- **Strong communication skills** - demonstrated through the ability to convey complex technical information to a non-technical audience through presentations
- Significant **teamwork experience** - worked with eight diverse groups over the past year on successful projects
- **Adaptable** to new challenges - demonstrated through working in an agile environment throughout the full

development process of a use case, from planning to implementation

RELEVANT PROJECTS

KnowPros Online Forum Website

March 2022

- Planned, integrated, and launched a forum-based website for engineers built on proper Model-View-Controller software architecture
- Developed web framework using **Python** and Flask. Tested back-end using PyTest coverage testing tools and tested front-end using Selenium IDE
- Collaborated with a team of 6 developers, using GitHub to coordinate work
 - Website link: <http://knowpros.pythonanywhere.com/unregisteredMain>

Transport Protocol Text Manipulator

February 2022

- Developed a client-server network application that can split and merge text using TCP and UDP socket programming
- Built program using **C++** to implement client end to initiate a connection to send texts through, and implemented server end to manipulate words to send back to the client. Data exchange was through both TCP and UDP connections that were manually programmed
- Designed, implemented, and tested this application alone, using leadership skills to solve problems efficiently and remove bugs without outside assistance from peers. The application was finished more than three days before the deadline due to initiative

Homecare Nurse Database Application

December 2021

- Designed, integrated, and tested a database application to be used by home care nurses to track patients, inventory, available doctors, patient scheduling, and past histories of patients
- Developed web framework using **Python** and MySQL. Tested back-end using PyTest coverage testing tools and tested front-end using Selenium IDE
- Collaborated with a team of 3 developers, using GitHub to coordinate work

EDUCATION

Bachelor of Science in Software Engineering, minor in Mechatronics Engineering

Schulich School of Engineering, University of Calgary, Calgary, AB

2020 - 2024

- Relevant Courses: **Software Testing, Reliability, and Quality** (SENG 438), **Computer Networks** (CPSC 441), **Fundamentals of Biometric Systems Design** (ENCM 509), Software Architecture (SENG 401), Principles of Software Design (ENSF 480), Data Base Management Systems (CPSC 471)
- GPA: 3.4