AMARTUVSHIN ALTANGEREL

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SUMMARY

A Senior Data Scientist with over 5 years of experience in predictive modeling and team leadership. Skilled in Python, machine learning libraries, and data analysis. Seeking a challenging role in Japan to leverage analytical skills and contribute to innovative projects. Currently deep diving into Generative AI technologies.

WORK EXPERIENCE

Senior data scientist, Khanbank **Jan 2023 - Present**

- Led a team of data engineer, analyst & scientist to develop predictive models and perform statistical analysis on large datasets at largest bank in Mongolia.
- Designed and implement machine learning algorithms using python, keras and scikit-learn.
- Conducted EDA and visualization to communicate insights effectively to stakeholders.

Data scientist, Khanbank **May 2020 - Dec 2022**

- Developed predictive models for customer loan domain.
- Automated data collection and analysis workflows using Pyspark and SQL queries.
- Designed and developed RESTful APIs using Flask in Python.
- Maintained System Environment for the website on Linux red hat.

Risk Manager, Mongolian Stock Exchange **Mar 2018 - Jan 2020**

- Responsible for the overall share volatility control, stress test and contributed heavily in drafting post-trade rules, procedures and guidelines

EDUCATION

Bachelor of Economics **Sep 2012 - May 2017**

University of Finance and Economics in Mongolia

- Thesis on "Portfolio Optmization”

ADDITIONAL INFORMATION

- **Programming Language:** Python, Pyspark, Javascript
- **Database**: Oracle, Cassandra, Datalake, Lakehouse
- **Frameworks**: Scikit learn, keras, pandas, numpy, openpyxl, Xgboost, pytorch
- **Web Development**: Flask, Django, RestAPI
- **Cloud Tech**: Azure Devops
- **Version Control**: Git
- **Languages**: English (Professional), Japan (JLPT n5 to n4 level, currently studying).

CERTIFICATES & AWARDS

- **Certificates:**

  Advanced Python Projects: Build AI Applications on Linkedin
  How to Keep Your Team on the Bleeding Edge of AI Innovation on Linkedin
  Neural Networks and Deep Learning from DeeplearningAI on Coursera
  Opensource AI models from deeplearningAI on Coursera
  Building AI systems using LLM from deeplearningAI on Coursera

- **Awards:**
  1st place in Generative AI business solution HackAIthon in 2024 organized by DataStax

PROJECTS

Machine Learning Projects

Business Customer Identification Model: This classification model leverages transaction data (including amount, frequency, and transaction description) to identify customers engaged in business activities and determine their business sectors. Using XGBoost, the model was developed to classify customers effectively based on their transaction patterns. It plays a critical role in the bank's online loan approval process for business loans, enabling more targeted and efficient lending decisions. I served as the lead data scientist on this project, overseeing the development and deployment of the model to ensure its accuracy and reliability.

Family Linkage Model: This model identifies bank customers' relatives and spouses by analyzing transaction data patterns. Using a classification approach with XGBoost, the model successfully discerns familial relationships based on shared transactions, frequency, and other transaction characteristics. The insights derived from this model help in providing personalized services and understanding customer networks as well as debt collection. I played a pivotal role as the lead data scientist in this project, overseeing the development, training, and implementation of the model to ensure its accuracy and effectiveness

Deposit Balance Prediction: This project aimed to predict future deposit balances for SME and corporate customers using various time series forecasting techniques. Recognizing that customer deposits are crucial to the bank's operations, we developed a predictive tool to identify periods when customers are likely to have low balances, allowing the bank to proactively engage with them. We evaluated multiple time series forecasting methods, including ARIMA, XGBoost, and LSTM. After thorough comparison, LSTM was selected due to its superior performance in capturing complex patterns in the data. As the lead data scientist on this project, I was responsible for model development, evaluation, and implementation

Behavioral Scoring Model: This model is designed to predict the likelihood of retail customers repaying their loans based on their transaction data. The project was developed in collaboration with Visa Corporation, leveraging their expertise in behavioral analytics. My role involved coordinating between the Visa team and Khan Bank's internal team during the early stages of the project, ensuring effective communication and alignment of goals. This model enables the bank to better assess customer credit risk and make informed lending decisions.

Software Development projects

The Risk Management System: is an internal web application used by Khanbank employees to monitor and evaluate customer-related risk factors, including behavioral scores. Additionally, the system provides functionalities for estimating corporate customers' loan limits. It also serves as a primary tool for recording and managing actions taken during the debt collection process.

Digital Loan Project: This project involved transforming traditional retail loan applications into a fully online process. Historically, calculating customer loan limits relied on complex formulas in Excel across various branches. My role was to ensure that the new online loan calculation system produced results consistent with traditional Excel calculations. To achieve this, I developed an automated testing process using over 1,000 test cases. This was implemented using Python libraries such as OpenPyXL, Pandas, and NumPy, along with tools like python requests to streamline and validate the accuracy of loan calculations efficiently.