

ABDULLAH SAMIL GUSER

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SUMMARY

AI/ML Engineer with proficiency in NLP, Large Language Models (both with fine-tuning & prompting) and Speech Processing. Possessing strong software engineering background that includes writing typesafe code with pydantic/mypy, unit & integration tests, creating GraphQL APIs, and CI/CD processes.

PRIMARY WORK EXPERIENCE

LEADIQ - Machine Learning Engineer

January 2022 – Present; San Francisco, CA

Tech Stack : PyTorch, GPT, OpenAI API, Strawberry, FastAPI, Flask, Streamlit, Transformers, HuggingFace, Langchain, Gitlab, Linux, AWS, MongoDB, Docker, Kubernetes, Datadog, Insomnia, Sisense, Redis, Redshift, Databricks, PySpark, Slack, Jira

- Developed personalized prospecting email generator using Large Language Models (LLMs) that helped users to reach out to >5x more prospects with competitive open & reply rates
- Improved the quality of emails generated by utilizing automated user feedback to either *fine-tune* or improve *prompting* of our LLMs
- Utilized with many different fine-tuning techniques to increase performance including *upside-down RL* / decision transformer style, weighting of user feedback data, various sampling strategies to reduce entropy collapse and improve variety
- Improved stability of *Databricks* pipeline that computes open & reply rate statistics daily.
- Trained a job title seniority & function classifier using bi-directional LSTMs, which replaced the old rule-based model and is used widely in production which achieved >90% classification accuracy among 6 seniority classes and >70% accuracy among 50 job functions that was used by the most central services in the company
- Trained a job title similarity scorer with a Siamese network achieving >95% classification accuracy
- Designed and developed APIs with *GraphQL*, wrote typesafe code with pydantic/mypy, wrote integration tests and unit tests, reviewed merge requests, inspected and resolved errors from datadog logs and customer complaints, collaborated with project manager and other team members
- Refactored existing code for performance; for example re-wrote a code snippet that finds the ticker of a company given its domain, helping us increase our precision by absolute 15%

SESTEK - Senior AI Research Engineer

March 2020 – December 2021; Istanbul, Turkey

Tech Stack : PyTorch, BERT, LSTM, FastAPI, Transformers, HuggingFace, Linux, Docker, Azure DevOps, Azure Cloud

- Fine-tuned kaldil library for task specific speech recognition models.
- Worked with different types of model architectures (CNNs, RNNs etc.) for various speech classification tasks (age & gender & emotion detection, spoofing detection for voice biometrics etc.)
- Conducted comprehensive literature reviews and wrote reports to ensure products stayed up-to-date
- Organized regular meetings with auditors for R&D projects to ensure the continuation of the investments
- Created a parent Python project for Machine Learning (ML) model pipeline to automate the training and deployment process which evolved into SestekAI, a product helping customers train and serve their models in their local environments

SESTEK - Research and Development Engineer

March 2017 – March 2020; Istanbul, Turkey

- Trained intent detection and FAQ text classifier models using PyTorch, Hugging Face libraries, LSTM, and Google BERT architectures, delivering 85% intent detection accuracy to the chatbot application of one of Turkey's largest banks
- Developed a sequence-to-sequence LSTM model that efficiently transformed textual representations of numeric values such as addresses, dates, and times into formatted forms, leading to a publication on this subject
- Took part in every stage of the ML Pipeline: data cleansing, training, evaluation, testing on real customer data, and deploying trained models as REST services using Python

EDUCATION

BOGAZICI UNIVERSITY

Istanbul, Turkey

Master of Science: Electrical and Electronics Engineering (GPA: 3.69)

2020

- Research Focus: Automated Response Generation for Corporate Chatbot Systems
- Specialized Courses: Pattern Recognition, Speech Processing, ML, Statistical Signal Analysis, Social Semantic Web

BOGAZICI UNIVERSITY

Istanbul, Turkey

Bachelor of Science: Electrical and Electronics Engineering (GPA: 3.28)

2017

- Core Courses: Probability, Matrix Theory, Signal Processing, Introduction to Image Processing

TECHNOLOGIES

- **Python** : PyTorch, Langchain, OpenAI API, Strawberry, FastAPI, Flask, Streamlit, Chainlit, Numpy, Pandas, Pydantic etc.
- **AI/ML** : GPT, Transformers, LSTM, BERT, Hugging Face, Llama, LlamaIndex, Mlflow
- **Data Analytics** : Databricks, PySpark, Redshift
- **CI/CD** : Gitlab, Github, Docker, Kubernetes, Datadog, Insomnia, Redis, Slack, Jira, AWS, MongoDB, Azure DevOps
- **Other** : Linux, Sisense

PUBLICATIONS

- A. S. Güser, M. Erden and M. L. Arslan, "*Semi-Automatic Formatting of Spelled Out Numbers*" 2019 27th Signal Processing and Communications Applications Conference (SIU), Sivas, Turkey, 2019

CERTIFICATES

- [AWS Certified Machine Learning – Specialty](#)
- [AWS Certified Cloud Practitioner](#)

ADDITIONAL

- **Achievements** : Ranked 6th among 1.7m students in the National University Entrance Exam (2012)
- **Activities** : Walking, Literature, Traveling