

# ABDULLAH SAMIL GUSER

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## SUMMARY

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AI/ML Engineer with proficiency in Large Language Models (fine-tuning and prompting), and developing agents / chatbots with Langchain. Possessing a strong software engineering background that includes writing typesafe code with pydantic/mypy, unit&integration tests, and creating GraphQL APIs

## PRIMARY WORK EXPERIENCE

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### LEADIQ

San Francisco, CA

#### Machine Learning Engineer

January 2022 – Present

- 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
- Created an account research application using Streamlit and LLMs, which users can search for accounts and leads and get a set of insights powered by many APIs that are then processed with LLMs to generate a summary
- Created a chatbot application, using Langchain and Streamlit, helping users identify pain points of a prospect and then write an email using the user instructions, utilizing many APIs as tools
- Developed usage and performance dashboards using Sisense, a product to build intelligent analytics, so our customers can monitor the statistics of the emails that we generate for them.
- 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

Istanbul, Turkey

#### Senior AI Research Engineer

March 2020 – December 2021

- 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

#### Research and Development Engineer

March 2017 – March 2020

- 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

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### 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

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- **Python** : PyTorch | Langchain | OpenAI API | Strawberry | FastAPI | Flask | Streamlit | Chainlit | Numpy | Pandas etc.
- **AI/ML** : GPT | Transformers | Pytorch | Hugging Face
- **Other** : Gitlab | Github | Linux | AWS | MongoDB | Docker | Datadog | Insomnia | Sisense | Redis

## PUBLICATIONS

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- 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

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

## ADDITIONAL

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