Taner Giray Sönmez

LinkedIn: @tanersnmz Github: @tanersnmz

Education

Columbia University

Master of Science in Machine Learning - Computer Science; GPA: 3.83/4 September 2024 - 2025 Expected Related Coursework: High-Performance Machine Learning, Machine Learning Cloud, Neural Networks and Deep Learning, Applied Machine Learning, Natural Language Processing, Artificial Intelligence

Sabanci University

Bachelor of Science - Computer Science; GPA: 3.82/4 September 2019 - June 2024 Honors and Awards: Dean's List - High Honor : 6x (Six Terms), 50% Encouragement Scholarship (Aug 2022 and Aug 2023) Related Coursework: Advanced Programming, Data Science, Machine Learning, Data Analysis and Research in Business, Mobile Application Development, Software Engineering, Computer Networks, Database Systems, Optimization Models in Business Analytics

Uppsala University

Bachelor of Science - Computer Science; Erasmus Exchange Program Honors and Awards: Monthly Erasmus Grant

INDUSTRY EXPERIENCE

Mars Athletic Club (MACFIT)

- Data Scientist (Part-Time)
 - : Developed a 'Churn Prediction Model' using statistical analysis and machine learning algorithms, specifically employing boosting methods such as XGBoost. Preprocessed a dataset with millions of rows of customer daily visit records. Improved contract renewal rate, generating over \$45,000 in additional monthly revenue.
 - : Conducted clustering with unsupervised learning to segment customers and identify their unique characteristics for more accurate predictions.
 - : Utilized SQL to extract, manipulate, and preprocess data for modeling purposes as well as for daily tasks.
 - : Implemented sentiment analysis on customer comments using NLP techniques, categorizing feedback by key areas and sentiment to identify trends in satisfaction and improvement opportunities.

Research Experience

Columbia University - Internet Real Time Lab

AI Researcher

- : Working on an LLM-based system for privacy policy analysis, integrating Retrieval-Augmented Generation to enhance policy clause classification and interpretation.
- : Exploring fine-tuning of transformer models, including BERT, for efficient and accurate real-time classification in a browser extension.
- : Developing and optimizing DSPy-based prompting pipelines to improve few-shot learning performance for labeling privacy clauses.
- : Investigating caching mechanisms and content filtering fallback strategies to improve system efficiency and reliability.
- : Contributing to a proof-of-concept Chrome extension that leverages LLMs to provide real-time privacy risk alerts for web users.

Mars Athletic Club - Sabanci University

ML Researcher

- : Studied exercise habit formation using machine learning and causal inference on data from Mars Athletic, Turkey's largest gym chain, supervised by Dr. Onur Varol.
- : Collaborated with 3 peers to develop a novel survival metric for assessing exercise habit durability.
- : Analyzed large-scale dataset from 200,000+ gym members to identify key factors influencing habit formation and provide actionable insights for gym management and public health.
- : First-authored the final project report detailing the study's methods and results; a journal publication is in progress.
- : ArXiv link can be accessed from here.

TEACHING EXPERIENCE

Sabanci University

Learning Assistant

- : Worked as a Learning Assistant for the 'Computational Approaches to Problem Solving' course, teaching Python and problem solving to freshman students.
- : Reinforced lecture topics and provided assistance to students during weekly recitation hours.

Email: tgs2126@columbia.edu tanersonmez.com

New York City, USA

Istanbul, Turkey

Uppsala, Sweden January 2023 - June 2023

Istanbul, Turkey

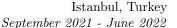
July 2023 - June 2024 / July 2022 - January 2023

New York City, USA

January 2025 - Present

Istanbul, Turkey

September 2023 - July 2024



Projects

Sales Prediction

- Machine Learning Developer
 - Developed a sales prediction model for restaurants in Uppsala, Sweden, leveraging data on public holidays, weather, and seasonal trends to improve forecast accuracy.
 - $\circ~:$ Conducted hyperparameter tuning and separate model training for individual restaurants, optimizing prediction accuracy by adapting to unique sales patterns.
 - $\circ\,$: Skills: Scikit-learn, Supervised Regression, Hyperparameter Tuning, Feature Engineering, Data Preprocessing.

FFP Tracker

- Web Developer
 - : Led a team of 3 in developing the FFP Tracker, a web platform that enhances transparency in the Turkish Football Federation by requiring teams to submit financial documents for review by the federation and its legal team.
 - \circ : Developed forecasting and monitoring tools to prevent breaches and ensure that teams generate revenue within budget, promoting accountability and transparency through public information access.
 - Skills: Frontend Development, React, PostgreSQL, ExpressJS, NodeJS, Agile Development, Git, Full Stack Development.

Socket Programming Quiz Game

Developer

- : Developed a client-server application, a quiz game, consisting of two modules: a server and a player.
- $\circ\,$: Implemented the server module to manage connections, pose questions, and track scores. Developed the player module for user enrollment and real-time score updates.

• : Skills: C#.

Heart Disease Prediction

Machine Learning Developer

- $\circ\,$: Conducted an exploratory data analysis on heart diseases and medical data with a team of 4 people.
- $\circ\,$: Developed a machine learning model to predict the presence of heart disease based on health information with high accuracy.
- $\circ\,$: Skills: Python, Pandas, Num
Py, Hypothesis Testing, Supervised Classification, Data Analysis.

Ace

 $Mobile \ App \ Developer$

- : Developed a mobile application, Ace, which serves as a social media platform for sports lovers, using Flutter with a team of 4.
- : Modeled the app after Instagram and utilized Flutter's widgets to create a unique user interface and user experience.
- Skills: Dart, Flutter, Frontend Development, Backend Development, App State Management, Firebase, Git, Android Development.

C++ Projects

Developer

- \circ : Developed multiple projects on various object-oriented programming topics, as listed below.
- : Skills: Pointers and Dynamic Memory, Linked Lists, Stacks and Queues, Templates, Advanced OOP Concepts, Data Representation, Inheritance and Polymorphism, Exception Handling, Multithreading, Visual Programming and GUIs.

Skills Summary and Certifications

- **Programming Languages**: Python, C++, JavaScript, SQL/noSQL, Dart, R (introductory experience).
- Tools and Frameworks: Scikit, Numpy, Pandas, Selenium, DoWhy, Large Scale Data Processing, Flutter, React, expressJS, nodeJS, Git, postgreSQL, mySQL, Pytorch, MongoDB, Verilog (introductory experience).
- Soft Skills: Agile Methodologies, Analytical Thinking, Teamwork, Problem Solving, Effective Communication, Team Player, Adaptability, Project Management.
- Certifications: Data Scientist with Python Track @Datacamp, Data Analyst with Python @Datacamp, Data-Driven Decision Making in SQL @Datacamp.

VOLUNTARY WORK

Gazi Mustafa Pasa Primary School

• Teacher

- : Participated in a volunteer project, visiting 4th-grade students weekly to assist with schoolwork and provide lessons on general culture, making a positive impact on their education and supporting their growth.
- : Developed interpersonal and communication skills, as well as the ability to work effectively in a team. Reinforced commitment to making a positive impact in the lives of others, showcasing a dedication to community service and social responsibility.

January 2023 - June 2023

September 2022 - January 2023

September 2022 - January 2023

February 2022 - June 2022

February 2022 - June 2022

February 2021 - June 2022

Kocaeli, Turkey

February 2020 - June 2020