

Taner Giray Sönmez

LinkedIn: @tanersnmz

Github: @tanersnmz

Email: tgs2126@columbia.edu

tanersonmez.com

EDUCATION

- Columbia University** New York City, USA
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** Istanbul, Turkey
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** Uppsala, Sweden
Bachelor of Science - Computer Science; Erasmus Exchange Program *January 2023 - June 2023*
Honors and Awards: Monthly Erasmus Grant

INDUSTRY EXPERIENCE

- Mars Athletic Club (MACFIT)** Istanbul, Turkey
Data Scientist (Part-Time) *July 2023 - June 2024 / July 2022 - January 2023*
 - : 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** New York City, USA
AI Researcher *January 2025 - Present*
 - : 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** Istanbul, Turkey
ML Researcher *September 2023 - July 2024*
 - : 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** Istanbul, Turkey
Learning Assistant *September 2021 - June 2022*
 - : 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.

PROJECTS

• Sales Prediction

Machine Learning Developer

January 2023 - June 2023

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

• FFP Tracker

Web Developer

September 2022 - January 2023

- : 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.
- : 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

September 2022 - January 2023

- : Developed a client-server application, a quiz game, consisting of two modules: a server and a player.
- : 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

February 2022 - June 2022

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

• Ace

Mobile App Developer

February 2022 - June 2022

- : 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

February 2021 - June 2022

- : 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, postgresSQL, 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

Kocaeli, Turkey

February 2020 - June 2020

- : 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.