



## İpek Öztaş

Graduate Computer Science Student  
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GitHub Profile

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## EDUCATION

### •Computer Science, Bilkent University

2020-2024

Graduate

CGPA: 3.48/4.00

- Full Scholarship (Ranked 205<sup>th</sup> among over 2.5 million students in the university entrance exam)
- High Honour Student
- Coursework: OOP with Java, Data Structures in C++, Database Management, Object Oriented Software Development, Operating Systems, Algorithms, **Machine Learning, Artificial Intelligence, Individual Research Study, Cloud Computing**, Computer Networks, **Deep Generative Networks**, Automata Theory and Formal Languages

### •Ted Ankara College High School

2016-2020

Graduate of the Math-Science Program with a ranking of 11<sup>th</sup>

Grade: 97.03

- Full Merit Scholarship (ranked in the top 1% in the high school entrance exam)

## PUBLICATIONS

### Refereed Conference Proceedings

#### Towards Automated Detection of Inline Code Comment Smells

Authors: İpek Öztaş, Eray Tüzün

Conference: In Proceedings of the 18th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement (ESEM 2024)

Date: September 4-6, 2024, in submission

## EXPERIENCE

### •Undergraduate Researcher, Bilkent University

8/2023–

Supervisor: Assistant Professor Dr. Eray Tüzün

Ankara

- Conducting research on Machine Learning algorithms for code comment smell detection.
- Implementing and testing various models and algorithms, employing OpenAI's GPT-4.
- Writing academic papers and reports summarizing research findings.
- Actively involved in the peer review process for academic papers and writing formal reviews to assist in the paper selection process.

### •Machine Learning Intern, DataBoss Security & Analytics

7/2023 – 9/2023

Supervisor: Ege Yosunkaya

ODTÜ Teknokent, Ankara, Turkey

- Completed a Time-Series Forecasting project, utilizing data analysis and feature engineering techniques. Implemented supervised machine learning models, including **Linear Regression, SARIMAX, Neural Network, and LightGBM** to forecast based on historical data. Gained skills in **Machine Learning, scikit-learn, numpy, and Python**.
- Experience with tools such as **Git, FastAPI, JWT token authentication, Docker, Dagster, web scraping, Pandas, Plotly, Jupyter Notebook, NumPy, and regression modeling**. Worked on ETL pipelines, implemented secure authentication, collected data through web scraping, performed data manipulation and visualization, and applied regression models for analysis..

### •Undergraduate Lab Assistant, Bilkent University

1/2023 – 6/2023

Supervisor: Onat Dalmaz

Ankara

- Assisted a section of **60 students** who took the course **CS115 Introduction to Programming with Python**.

### •Software Engineer Intern, Karel Electronics

7/2022 – 8/2022

Supervisor: Onur Aydın

Ankara

- Developed a client-server application in Python with **socket programming**. Worked in the **Network and Cloud Systems Department**. Designed and implemented a desktop app based on **client-server architecture**. PostgreSQL is used for the database.

### •Software Engineer Intern, TechNarts

5/2022 – 7/2022

Supervisor: Görkem Gülmez

Ankara

- Developed a full-stack e-commerce application using Django backend and MySQL database, and designed its frontend using HTML, CSS and Bootstrap. Implemented Stripe API for payment of the website.

## PERSONAL PROJECTS

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### •Styling with Neural Radiance Fields

Jan 2024–May 2024

*Bilkent University CS485 Deep Generative Networks Term Project*

- Tools & technologies used: Python, PyTorch, Colab, NeRF
- Implemented a novel approach to integrating artistic style transfer with Neural Radiance Fields (NeRF) for enhanced 3D scene generation

### •Flarum AWS Project

Jan 2024–May 2024

*Bilkent University CS443 Cloud Computing Term Project*

- Tools & technologies used: AWS Services, GitHub
- Implemented a forum application utilizing the AWS Services: **Amazon ECS, S3 Bucket, AWS WAF, Amazon RDS, Load Balancers, Lambda, Amazon SNS, Cloud Watch, AWS Rekognition, AWS CloudFront**

### •JobTalk: AI Supported Hiring Evaluation App

Sep 2023–May 2024

*Senior Design Project*

- Tools & technologies used: Flask, PyTorch, Whisper
- Developed a cloud-based web application to assess candidates' proficiency across various domains, encompassing sentiment analysis, self-expression, and communication abilities. Employed an AI model to facilitate an impartial evaluation process.

### •AI Algorithms for 2048 Game

Sep-Dec 2023

*Best Project for Bilkent University CS461 Artificial Intelligence*

- Tools & technologies used: Python, PyTorch, Gymnasium
- Developed and tested cutting-edge algorithms (Reinforcement Learning, Deep Q-Network, and Monte Carlo Tree Search) tailored for the 2048 tile-matching game. Chosen as the best project.

### •Dog Breed Classifier

Sep-Dec 2023

*Bilkent University CS464 Machine Learning Term Project*

- Tools & technologies used: Python, PyTorch, Keras
- Performed exploratory data analysis on the Stanford Dogs Dataset. Potentially augmented the dataset through feature engineering to optimize model training. Implemented a custom Convolutional Neural Network (CNN) and evaluated its performance against ResNet and EfficientNetV2.

### •Kurbag

Jan-June 2023

*Bilkent University CS353 Term Project*

- Tools & technologies used: React, Flask, Python, MySQL
- Built a web application similar to LinkedIn.

## TECHNICAL SKILLS AND INTERESTS

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**Programming Languages:** Python, Java, JavaScript, C/C++

**Developer Tools:** Docker, Latex, Git, GitHub

**Web Development:** Django, FastAPI, Flask, Vue, Node.js, HTML, CSS, AJAX, Bootstrap

**Cloud/Databases:** AWS, MySQL, PostgreSQL

**Machine Learning Libraries:** Keras, PyTorch, TensorFlow, Scikit-Learn, Pandas, Numpy, Matplotlib, Seaborn, Plotly

**Areas of Interest:** Software Engineering, Machine Learning, Data Science, Artificial Intelligence, Generative AI, Cloud

**Languages:** English (Highly proficient), German (Intermediate)

## POSITIONS OF RESPONSIBILITY

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•Volunteer, TDP Günköy Project, Bilkent University

2022-2023

•Delegate, Model United Nations Club

2018-2019

## ACHIEVEMENTS

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•IELTS Academic Overall Band Score: 8

2024

•ÖSYM Foreign Language Examination Ranked 34<sup>th</sup> among 2.5 million candidates

2021

•National University Entrance Exam Ranked 205<sup>th</sup> among 2.5 million candidates

2020

•Goethe-Institut Examination Overall Band Score: B1

2019

•Model United Nations Club Delegate in Eurosima (METU) and Munbu (Bilkent University)

2018-2019

•TÜBİTAK High School Science Fair Presented a term project in the Regional Science Fair

2019

•Stanford CS Bridge Program, Koç University

2019

•Summer Research Program, Koç University

2018