Curriculum Vitae

Kutay Tire

Austin, USA

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ABOUT

I am a first-year Ph.D. student in Electrical and Computer Engineering at the University of Texas at Austin. I earned a B.Sc. in Computer Science and Physics as a double major from Bilkent University. My research interests center on the applications and theoretical foundations of deep learning, time-series analysis, LLMs, and optimization.

EDUCATION

University of Texas at Austin, Austin, Texas   September 2025 — June 20230
Ph.D. in Electrical and Computer Engineering   Cumulative GPA: N/A
Advisors: Prof. Sujay Sanghavi and Prof. Haris Vikalo

Bilkent University, Ankara, Turkey   September 2020 — June 2025
B.S. in Computer Science   Cumulative GPA: 3.95/4.00

Bilkent University, Ankara, Turkey   September 2021 — June 2025
B.S. in Physics (Valedictorian)   Cumulative GPA: 3.96/4.00

PUBLICATIONS

- E. O. Taga, H. A. Gozeten, **K. Tire**, R. Dalvi, R. Heckel, and S. Oymak, "Filter, Augment, Forecast: Online Data Selection for Robust Time Series Forecasting," *ICML 2025 Workshop on Foundation Models for Sequential Data (FMSD)*, 2025.
- **K. Tire**, E. O. Taga, M. E. Ildiz, and S. Oymak, "Retrieval-Augmented Time Series Forecasting," *AAAI-25 Workshop on AI for Time Series Analysis (AI4TS)*, 2025. Available: `https://doi.org/10.48550/arXiv.2411.08249`
- **K. Tire**, B. Cakar, and E. Tuzun, "Evaluating the Impact of Data Cleaning on the Quality of Generated Pull Request Descriptions," *arXiv preprint arXiv:2505.01120*, 2025. Available: `https://arxiv.org/abs/2505.01120`

ACADEMIC EXPERIENCE

University of Texas at Austin   Austin, USA
Graduate Researcher   August 2025 — Present

- **Supervisor:** Prof. Sujay Sanghavi and Prof. Haris Vikalo

University of Michigan   Ann Arbor, USA
Research Intern   June 2024 — Present

- Working on a covariance-aware tokenization strategy for time-series transformers with theoretical guarantees on solving constrained quadratic programmes.
- Investigated and demonstrated the positive effect of RAG (Retrieval-augmented Generation) in the time series domain.
- **Supervisor:** Prof. Samet Oymak

BILSEN   Ankara, Turkey
Undergraduate Researcher   September 2023 — June 2024

- Conducted a comprehensive analysis of the impact of data cleaning on the performance of transformer-based models, such as T5 and BART, for automatic pull request description generation.
- **Supervisor:** Prof. Eray Tüzün

University of Cambridge   Cambridge, UK
Summer Research Intern   June 2023 — September 2023

- Developed Neural-MLS, a novel deep learning approach on point clouds, to acquire weights, which are then utilized in mesh construction through Implicit Moving Least Squares (IMLS).
- **Supervisor:** Prof. Cengiz Öztireli

HONORS AND AWARDS

- **ECE Departmental Fellowship** at the University of Texas at Austin   2025
- **Valedictorian** of the Physics cohort at Bilkent University   2025
- **Productivity Award** for senior design project at the CS Fair at Bilkent University   2024
- **High Honor Student** at Bilkent University, maintained a GPA of 3.5 or higher each semester   2020–2025
- **Tuition Scholarship** at Bilkent University, awarded for success in the University Entrance Exam   2020
- **Valedictorian** of TED Ankara College Private High School, graduating with a CGPA of 99.15   2020
- **Valedictorian** of TED Ankara College Private Middle School, graduating with a CGPA of 98.53   2016

PROJECTS

- **PieR:** PieR is a software analytics project that leverages AI and Machine Learning for pull request classification. For a specific repository, the project analyzes incoming pull requests to classify them into categories. This project was developed as a senior project and received the **Productivity Award**. I served as the Head of ML.
- **Career Bridge:** A LinkedIn-like web application designed to connect professionals with job opportunities. This application was developed for the CS353 - Database Systems course at Bilkent University. I created the backend using Python FastAPI and contributed to the database management of the project.
- **Erasmus Manager (ERSMS):** This project aimed to eliminate paperwork and streamline the work of exchange coordinators and students by moving the entire Erasmus process to a web-based digital platform. I developed the frontend using AngularJS as part of the CS319 - Object-Oriented Programming course. Designed for use by students and coordinators at Bilkent University, the project was selected as the best among 25 other projects.

OTHER EXPERIENCES

IBM Qiskit Global Summer School   Online
Summer School Participant   July 2023 — August 2023

- Attended Qiskit Global Summer School. The program included 3 hours of lectures and 2 hours of lab assignments covering topics such as Quantum Algorithms (Grover, Deutsch-Josza, Quantum Fourier Transform), Quantum Teleportation, Error Mitigation. Completed lab assignments successfully and earned Quantum Excellence Certificate.

SNG Studios   Ankara, Turkey
Undergraduate Intern   August 2022 — September 2022

- Developed an interactive graph visualization of user data utilizing the NetworkX library. Performed data analysis using machine learning algorithms from the Scikit-learn library.

SKILLS

Technical Skills   C, C++, Python, PyTorch, Java, SystemVerilog, MATLAB, MySQL, Qiskit
Soft Skills   Critical Thinking, Problem-Solving, Creativity, Effective Communication
Language Skills   Turkish (Native), English (Fluent), German (Intermediate)

SELECTED COURSES

Computer Science Courses
- Statistical Learning and Data Analytics
- Deep Generative Networks
- Introduction to Machine Learning
- Algorithms
- Basics of Signals and Systems

Physics Courses
- Topics in Quantum Information
- Theory of General Relativity
- Numerical Methods in Physics
- Advanced Calculus for Applications in Physics
- Quantum Mechanics

ENGLISH TESTS

TOEFL iBT: 114 (overall score) — Listening: 28 — Reading: 28 — Speaking: 29 — Writing: 29 — Test date: June 2024

EXTRA-CURRICULAR ACTIVITIES

- Member of General Assembly in Bilkent Chess Club. Regularly organized chess tournaments every 2 weeks to entertain the students.