

Oğuz Kurt

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Education

Dartmouth College , Hanover, NH	September 2024 – June 2028
<i>Bachelor of Arts in Engineering Sciences; Bachelor of Engineering in Electrical Engineering</i>	GPA: 3.7/4.0
Relevant Coursework: Control Theory, Solid Mechanics, Linear Algebra, Differential Equations	
Robert College , Istanbul, Turkey	September 2019 – June 2024
<i>High School</i>	GPA: 96.6/100

Relevant Experience

Mechanize, Inc. , San Francisco, CA	June 2026 – Present
<i>Software Engineering Intern</i>	
- Built reinforcement learning environments and evals for frontier large language models. - Analyzed model rollouts to surface systematic failure modes and refine task specifications and grading criteria.	
Dartmouth Applied Leadership and Innovation (DALI) Lab , Hanover, NH	September 2025 – Present
<i>Software Engineer</i>	
- Built a decision-support platform for oncology patient outreach, using Monte Carlo simulation to inform physician staffing; ported legacy R to parallelized Python, cutting memory use up to 80%. - Deployed the platform on AWS (Docker, SageMaker, Lambda, S3) to support large-scale simulation runs.	
Operations Research Lab at Dartmouth College , Hanover, NH	January 2025 – June 2025
<i>Research Assistant</i>	
Implemented mixed-integer linear programming models in Gurobi and cvxpy to optimize bike-sharing and transportation networks under Prof. Vikrant Vaze, applying adaptive discretization to improve runtime and solutions.	

Projects

Shoulder Brace for Post-Surgical Therapy Patients	April 2026 – June 2026
<i>Embedded / Hardware Lead</i>	
- Built a two-IMU wearable that measures shoulder range-of-motion and gamifies at-home rehab exercises, owning part selection, soldering, and firmware in Rust (async Embassy) streaming IMU data over Bluetooth Low Energy. - Validated against a clinical goniometer across 102 readings from 11 users ($r = 0.89$, 6.4° mean error).	
Active Suspension Controller	May 2026 – June 2026
<i>Controls / Data Analysis</i>	
- Modeled a 5th-order physical mass-spring-damper system using black-box transfer-function fitting and first-principles methods, validating it against experimental sine frequency response. - Co-designed a double-notch-plus-PI compensator in MATLAB to cancel lightly-damped resonant poles for a team-built analog implementation.	
Laser-Cut Wooden Truss Bridge	February 2026 – March 2026
<i>CAD / Structural Analysis</i>	
Designed a truss bridge in SolidWorks, predicted deflection and buckling via FEA, load-tested to failure – exactly matching predicted deflection change from 0.5–1 kN and confirming buckling as the primary failure mode.	
toplaş – buses in Istanbul	July 2024 – Present
<i>Founding Developer</i>	
- Published toplaş, a React Native + Expo transit app, reaching 4.1k users and 85k+ pageviews. - Built scraping pipelines for minutely bus-location and traffic data, collecting 7.3 billion rows over 12 months.	

Additional Experience

ARC Robotics Club, FRC 6014 , Istanbul, Turkey	June 2021 – June 2024
<i>Head of Programming</i>	
Engineered PID control loops, autonomous routines over 8 competitions; qualified for 2024 World Championship.	
The Dartmouth, Inc. , Hanover, NH	September 2024 – Present
<i>Staff Writer</i>	
Reported on campus events, features, and elections, writing 15 articles and conducting 45+ interviews.	

Skills & Interests

Technical: Rust, C, Python, TypeScript, JavaScript, SQL, Linux, Docker; Embedded (ESP32, BLE), MATLAB, SolidWorks
Interests: Tiramisu, public transit