

Doğuş Berk Koçak

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EDUCATION

Bilkent University — Industrial Engineering MSc <i>CGPA 3.81 / 4.00</i>	2022 – Present <i>Ankara, Turkey</i>
Middle East Technical University — Industrial Engineering BSc <i>CGPA 3.21 / 4.00</i>	2016 – 2022 <i>Ankara, Turkey</i>

RESEARCH EXPERIENCE

Predictive Operational Workforce Strategies for Managing Vehicle Failures <ul style="list-style-type: none">Conducted an empirical study assessing vehicle reliability and providing insights for decision-makersDeveloped statistical models for predicting vehicle failures, maintenance, and workforce planningMethodologies: Bayesian Hierarchical Modeling, MCMC, Stochastic Processes, Reliability Theory	2022 – Present
Addressing Coverage Holes with Multiple Mobile Sensors <ul style="list-style-type: none">Granted by The Scientific and Technological Research Council of Turkey (TÜBİTAK)Coverage hole recovery problem with multiple sensors in Wireless Sensor NetworksMethodologies: Mixed Integer Programming, Goal Programming, Heuristic Design	2021 – Present

TEACHING EXPERIENCE

Applied Data Analysis — IE451 <ul style="list-style-type: none">Conducted labs and prepared materials on statistical modeling and data analysis using R	2024 – 2025
Stochastic Models — IE325 <ul style="list-style-type: none">Prepared quizzes, homework, and recitation materials; conducted bi-weekly recitations on probability, Markov chains, Poisson processes, continuous-time Markov chains, and queueing models	2023 – 2025
Manufacturing Processes and Operations Analysis — IE272 <ul style="list-style-type: none">Conducted CAD software labs and assignments, assisted term projects on manufacturing system simulation	2022 – 2023

INDUSTRY EXPERIENCE

System Design Member — Arçelik A.Ş. x Middle East Technical University <ul style="list-style-type: none">Decision support system for material requirement planning in refrigerator plant	Oct 2021 – June 2022 <i>Eskişehir, Turkey</i>
Business Development Intern — UrbanFarm DE <ul style="list-style-type: none">Granted by Erasmus+ ProgrammeCommunicated with customers and tracked sales operations using automation tools	Jul 2021 – Oct 2021 <i>Berlin, Germany</i>
Business Development Intern — TOFAŞ Türk Otomobil Fabrikası A.Ş. <ul style="list-style-type: none">Partner of FCA, manufacturer of Fiat brand passenger cars and commercial vehiclesPrivate lease and used cars department	Feb 2021 – Mar 2021 <i>Istanbul, Turkey</i>
Process Quality Intern — Türk Traktor ve Ziraat Makineleri A.Ş. <ul style="list-style-type: none">Türk Traktor is the producer of New Holland and Case IH brand tractors in TurkeyImproved the management information system of quality control processes	Aug 2020 – Sep 2020 <i>Ankara, Turkey</i>
Project Intern — QNB Finansbank A.Ş. <ul style="list-style-type: none">Project on increasing the number of active customers in the mass segment	Jul 2020 – Aug 2020 <i>Istanbul, Turkey</i>
Process Engineering Intern — Eti Gıda Sanayi ve Ticaret A.Ş. <ul style="list-style-type: none">Productivity analysis, work and time study	Jun 2019 – Jul 2019 <i>Eskişehir, Turkey</i>

SKILLS

Languages: Turkish, English (TOEFL: 101)

Computer Languages: Python, R, C++, MATLAB

Optimization Tools: Gurobi, IBM CPLEX, GAMS

Others: L^AT_EX, Excel VBA, SQL, Minitab, Arena

ACHIEVEMENTS

Outstanding Teaching Award: Recognized annually for excellence in teaching at Bilkent University

Graduate Success Scholarship: Awarded to promising students for outstanding academic potential and commitment to future graduate studies by The Scientific and Technological Council of Turkey

Ranked in the top 0.05% (999th out of 2 million students): The University Entrance Exam (YGS/LYS)

EXTRACURRICULAR ACTIVITY

- Five years of debate experience participated in many organizations as a competitor and chair representing METU Debate Society. Additionally, served as a debate trainer in universities and high schools in Ankara. Debate topics included social issues such as individual-state relations, ethics, morality, media, minority rights, law, etc.
- Attended Anadolu University Sociology Program (Open Education Faculty) for 2 years; discontinued due to scheduling conflicts.