

DUYGU SOYLEMEZ

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EDUCATION

PhD in Operations Research / Management Science & MBA,

University of Chicago Booth School of Business, Chicago

September 2021 – Present

MS in Industrial Engineering,

Ihsan Dogramaci Bilkent University, Ankara

2019-2021

GPA: 3.83/4.0

BS in Industrial Engineering,

Ihsan Dogramaci Bilkent University, Ankara

2014-2019

GPA: 3.91/4.0, Ranking: 2 out of 162

PROFESSIONAL EXPERIENCE

University of Chicago Booth School of Business, Chicago

Graduate Researcher

2022 – Present

Ambulatory Care Access Project

- Collaborating with UChicago Medicine to analyze outpatient clinic data from 80+ raw datasets (250 GB).
- Constructing new operational structures—Provider Episode and Specialty Episode—to trace patient visit patterns and analyze access, cancellations, and continuity of care.
- Building a simulation model to assess a new alternative scheduling system aimed at improving new patient throughput and waiting times without compromising return-patient service, to be piloted.
- Developed a data-driven optimization model for outpatient clinic capacity planning to maximize new patient throughput under visit-pattern and capacity constraints.
- Performing large-scale data cleaning and processing to construct 1.27M provider episodes from 4.8M outpatient encounters.
- Developed a method combining survival analysis and importance sampling to estimate provider-episode duration distributions from incomplete patient visit histories.
- Presented at: INFORMS 2025; INFORMS Healthcare 2026

Local and Global (Approximate) Submodularity in Network Design

- Formulated large-scale network design problems as structured set-optimization models capturing bipartite coverage and fulfillment flow constraints.
- Developed fast constant-factor local-search algorithms enabled by LP-based surrogate functions that exploit approximate and local submodularity for major computational gains.
- Submitted to *Management Science*; presented at: POMS 2023, INFORMS 2024.

Teaching Assistant

Jan–Apr 2024; Jan–Apr 2025

- Assisted MBA and EMBA courses in Operations Management and Healthcare Analytics across Chicago, Hong Kong, and London; led review sessions, provided mentoring, and graded assignments.

Ihsan Dogramaci Bilkent University, Ankara

Undergraduate & Graduate Researcher

August 2018 – September 2021

Assortment Planning Considering Split Orders

- Developed assortment-planning optimization models and heuristics to minimize split shipments.
- Presented at: INFORMS 2022; National OR/IE Congress 2021 & 2019

Teaching Assistant

Feb 2019–Jun 2021

- Supported undergraduate courses in Modeling, Optimization, and Production Information Systems.

GlaxoSmithKline, Istanbul

October 2018 - May 2019

- Capstone project: Estimated demand and made base-stock inventory decisions at the distributor level.

Internships

2016 – 2019

Arcelik A.S., ABB Group, Sisecam Group, Roketsan Missiles Inc.

Turkey

- Completed internships in production planning, process improvement, and time-study across operations.

COMPUTER SKILLS

- **Programming & Data:** Python, SQL, Dataiku DSS, Java, MATLAB, VBA
- **Optimization & Modeling:** Gurobi, Excel, CPLEX, GAMS, Xpress IVE

ACADEMIC ACHIEVEMENTS

- **Bilkent:** 2nd/162 (2019); Undergraduate Research Award; Senior Project 2nd (2019); Fully Funded Scholarship (2014–2019)
- **National ranks:** 179th/2M+ (university entrance exam); 195th/1M+ (high school entrance exam)