Berke Can Rizai

+90 5302680352 | berkecanrizai.github.io | berkecanrizai1@gmail.com | linkedin.com/in/berkecanrizai | github.com/berkecanrizai

- Open-source contributor to popular ML libraries scikit-learn and MLflow.

- Relevant Coursework: Machine Learning, AI, Data Privacy Security, Applied Statistics, NLP, Optimization Methods, Operating Systems, Stochastic Methods, Computer Networks, Computer Vision with Deep Learning

- Tech Stack: Java, Python, C, SQL, Data Science, ML libraries (XGBoost, ScikitLearn, Pytorch, NumPy, Pandas), AWS, MongoDB, Docker, C#, React Js, Airflow

EDUCATION

Simon Fraser University   Jan. 2022 – Apr. 2022
B.S. Computer Science – Exchange, Study in Canada Scholarships   *Vancouver, Canada*

Koç University   2018 – 2023
B.S. Computer Engineering – GPA: 3.45 | Vehbi Koç Scholars | Dean's Honor List

Koç University   2020 – 2023
B.S. Industrial Engineering (Double Major)

EXPERIENCE

Data Scientist   March 2023 – Present
Getir   *Istanbul, Turkey*

- Responsible for end-to-end process of creating and deploying recommender models, working closely with stakeholders to ensure optimal performance and continuous improvement with custom KPIs and A/B testing.
- Implemented matrix factorization model with LightFM to enhance the product details page with more relevant product recommendations.
- Built offline evaluation library for recommender systems that enabled faster iterations of recommendation engines.

Data Science Intern   May 2022 – March 2023
Getir

- Developed and deployed a job recommender model in production utilizing NLP topic modeling that serves 20000 customers daily accelerated by NVIDIA Rapids for text preprocessing and inference.
- Built a SOTA double machine learning (causal inference) pipeline that delivers highly accurate estimates of price elasticity, allowing for more effective pricing optimization and promotion offers.
- Created Tableau dashboard that is updated by live model for decision making by pricing team.
- Developed optimization model for courier shift assignment resulting in $500.000 annual savings.
- Tools: Python, FastAPI, AWS SageMaker, MongoDB, SQL, RedShift, S3, Airflow, MLflow

Undergraduate Research Assistant   Nov. 2021 – Present
IUI Lab (Prof. Metin Sezgin), Koç University

- Deployed Pytorch model to production for handwriting recognition and classification.
- Improved app fluidity with JavaScript by reducing repetitive API calls.
- Implemented unit tests for full functionality coverage, created CI/CD pipeline.
- Created pipeline for pre-processing drawing data, training and optimizing SVM model and logging results.

Software Engineer Intern   Feb. 2021 – Jan. 2022
Koçfinans

- Created a web application that retrieves and sends authentication codes to our sales force in real-time.
- Implemented employee skills vectorization for clustering in gamification project.
- Created a Java app that reads data stored on Excel documents and transfers them to JSON.
- Transformation and data processing on more than 1200 clients unstructured data.
- Contributed to pre-processing step of ML project for credit risk scoring. Tools: Python, Java Spring, React Js.

Student Ambassador   Dec. 2020 – Aug. 2021
Microsoft

- Created projects using Azure Cognitive Services (Vision, Text analytic, Search API, ML).

Software Engineer   Nov. 2020 – May. 2021
Spark Team

- Developed and formatted Python codes for an autonomous electric car. Area of interest detection with OpenCV.

Game Developer Intern   Sep. – Oct. 2020
Mayadem

- Developed a 2D Android platformer game using C# and Unity.

Projects

- 9 Slots Are All You Need For Unpaired Image-to-Image Translation
  Aim in this project is to implement the SLOT attention mechanism from the SLOT attention paper, into the AttentionGAN and look for possible improvements. Tools: Python, PyTorch
  https://github.com/ribo-apps/COMP411-Project
- Senior Project (Investment News App)
  Built REST APIs with Django module. Deployed NLP summary pipeline with BERT model that summarizes 1000+ news every hour. Implemented Log-in and authentication features. Created a news scraper for gathering financial news from more than 50 sources. Tools: Django Rest, PyTorch, Huggingface transformers, Celery, Redis, MySQL, Kotlin.
  https://github.com/Invest-Smart-COMP-491/invest-smart-backend-web
- Confidential Maternal Health Guardian (DP Stats and ML for Confidential Data)
  Implemented differentially private random forest prediction pipeline, served on Django Rest API. Further increased security against membership inference attack by augmenting whole training data without losing information about distribution or reliability of predictor. https://github.com/Confidential-Maternal-Health-Guardian
- Data Privacy and Security (Grad course) Assignments
  Assignments from topics such as differential privacy, DP ML, security, local differential privacy (RAPPOR etc.).
  https://github.com/berkecanrizai/privacy-assignments
- Linear Programming Solver
  Java app that takes objective function and constraints from user in a GUI and outputs solution step by step with two-phase simplex method. https://github.com/berkecanrizai/two-phase-solver
- FPGA Board Morse Translator
  FPGA Board translates morse input from switches to alphabet and shows on the screen and vice versa. This project was selected as 4th best project in class of 113 students in digital design course. Written with VHDL.
- Linux virtual memory manager implemented with C. https://github.com/berkecanrizai/virtual-memory-manager

Extracurricular Activity

Committee Member
IEEE Student Branch
- Managed team of 6. Promoted the club events and designed swag such as notebooks and t-shirts.

IndEx'19 Volunteer
IES Student Branch
- Coordinated case solving events with companies. Designed workshops.

Event Officer
Koç University Economics Club
- Reached out to speakers for economics conference, helped the organization of the event.

Team Member
Nasa CanSat Competition
- Found sponsorships that would help us gather electronic parts.

Competitive Swimmer
- Used to swim from age of 4 to 14. Have two medals from İstanbul city-wide swimming competitions in 2011 and 2012.

Technical Skills

Languages: Java, Python, C, SQL (PostgreSQL, SQLite, CX2), React Js., C#, VHDL
Other: Amazon Web Services, Docker, Git, Kubernetes, Airflow