Yasemin Karaca

Data Scientist & Computer Engineer

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Profile

Motivated graduate with a BSc in Computer Engineering and an MSc in Data Science and AI, with a dissertation on "Generative AI in the Enterprise as a Co-worker for Tech Support," sponsored by Google. I bring strong programming, systems design, and problem-solving skills, along with a structured, collaborative work style. My academic knowledge has been applied in real-world projects, contributing to successful projects, and I'm excited to embrace new challenges in the area.

Experience

DATA ANALYST | KONAK FASTENERS   DEC 2022 - JUNE 2023
- Created and maintained interactive Power BI dashboards, enabling data-driven decisions across departments.
- Ensured data accuracy through cleaning, transformation, and validation using SQL and Excel.
- Assisted in data modelling and statistical analysis to identify trends and optimise business processes.
- Collaborated with Agile teams to define KPIs and deliver customised data solutions aligned with organisational goals.

JUNIOR SOFTWARE DEVELOPER | ORION INNOVATION   FEB 2022 - JUNE 2022
- Led the front-end development of an iOS app using Swift, enhancing UI/UX.
- Developed a chat app with Firebase using MVVM architecture for scalable, maintainable code.
- Contributed to bug fixes, improvements, and unit testing to ensure high software quality.
- Researched and reported peer-to-peer connections to optimise network efficiency and performance.

JUNIOR SOFTWARE DEVELOPER | AMBEENT AI   FEB 2021 - JUNE 2021
- Executed user test analysis on optimised modems, identifying key areas for improvement.
- Supported backend development for a Google Chrome extension app, enhancing functionality and user interaction.
- Prepared daily and weekly reports, ensuring consistent project tracking and stakeholder updates.
- Performed extensive research on modem models, delivering insights that informed product development strategies.

Education

MSc. in Data Science and Artificial Intelligence, Bournemouth University
SEP 2023 – SEP 2024
Distinction
Dissertation sponsored by Google

BSc. in Computer Engineering and Science, Bahcesehir University
SEP 2018 – JUL 2023
Grade: 3.00/4.00

Projects

GENERATIVE AI IN THE ENTERPRISE AS A CO-WORKER FOR TECH SUPPORT
Google Sponsored Dissertation
· Developed a hybrid AI-human model using the OODA loop framework, improving decision-making, response times and customer satisfaction in tech support.
· Applied XAI methodologies like LIME, to ensure transparency in AI decision-making processes and collaboration between AI systems and engineers.
· Worked closely with Google to optimise data schemas and AI models, using machine learning methods to automate and optimise tech support tasks.

MOVIE RECOMMENDATION SYSTEM
· Developed an AI-based movie recommendation system to enhance user experience, integrating collaborative filtering (cosine similarity, KNN), matrix factorisation (SVD), and neural networks (NCF).
· Utilised content-based and hybrid filtering to analyse user behaviour and preferences.
· Improved recommendation accuracy, evidenced by RMSE, MAE, precision, recall, and F1-score metrics.

DATA PROCESSING AND ANALYTICS
· Developed and tested SQL and MongoDB cases to ensure functionality and data retrieval efficiency.
· Applied machine learning techniques for data analysis and feature selection.
· Employed PCA for dimensionality reduction, optimising model performance

PEER–TO–PEER FILE TRANSFER APPLICATION
· Designed and implemented a P2P file sharing application using Python.
· Developed processes to broadcast file lists, listen for peer announcements, and store file info locally.
· Implemented file download and upload mechanisms using TCP sessions for chunked and merged files.

Skills & Languages

Programming: C++, Python, Java, SQL, JavaScript, CSS
Data Skills: Data Preprocessing, Data Visualisation, Data Analysis, EDA
AI/ML Skills: TensorFlow, Scikit-learn, PyTorch, Matplotlib, BeautifulSoup
Languages: English (Fluent), Turkish (Native), Dutch (Beginner)

Tools & Software

Jupyter Notebook, MongoDB, Tableau, Oracle, Jira, Git, APIs (REST), Microsoft Word, Excel and PowerPoint

Certifications

Google Analytics for Beginners
Python Programming Bootcamp
Career Essentials in Generative AI & Data Analysis by Microsoft and LinkedIn
IELTS overall score 7

Additional Information

· Volunteered with the TEMA Foundation to protect natural assets, reflecting strong teamwork skills.
· Served as a Crew Member in the Software and Informatics University Club where I developed effective communication and collaboration skills while contributing to various projects.
· Achieved Honour Roll recognition five times during my bachelor's degree, showcasing my dedication, time management and consistent academic excellence.