

BERKAY MENGUNOGUL

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WORK EXPERIENCE

Wisecare AI
Founding Machine Learning Engineer, Remote

St. Louis, Missouri, USA
Feb 2024 - Present

- Developed a cutting-edge multi-agent AI system, enabling real-time, expert-level answers on insurance plans, marketplace policies, and user inquiries through 100% AI-driven customer support.
- Created a personalized recommendation engine to match users with optimal insurance plans, improving user experience and decision-making.
- Automated AI testing and monitoring to ensure reliability, consistency and smooth system updates without issues.
- Adopted Behavior-Driven Development (BDD) to improve collaboration with stakeholders, ensuring AI solutions aligned with user needs and reducing post-deployment issues.

VeriUS Technology
Machine Learning Engineer, Remote

Istanbul, Turkey
Sep 2022 - Sep 2023

- Overcame data shortages by expanding a small 500-entry dataset to over 10,000 records using advanced augmentation techniques, ensuring the AI models could handle diverse and rare cases effectively.
- Optimized AI models for efficiency by fine-tuning and distilling 60+ open-source models, reducing computing costs by 80% while maintaining accuracy, enabling the company to scale services without extra infrastructure costs.
- Accelerated AI development by adopting cutting-edge training methods, reducing model training time by 75% and allowing faster iteration on new features and improvements.
- Mentored 5 interns in AI development, leading them to build a 98% accurate entity recognition system.
- Streamlined AI deployment with MLFlow and Docker for faster business and customer adaptation.

Marmara University
Undergraduate Researcher, Supervisor: Assoc. Prof. Murat Can Ganiz

Istanbul, Turkey
Feb 2022 - Aug 2022

- Developed ML models to anonymize sensitive legal data, ensuring privacy law compliance and data protection.
- Managed the full data labeling process for 10,000+ legal documents, accelerating research and improving the quality of legal AI applications.

Shelly Sleep
Full-Stack Developer, Remote

Berlin, Germany
Jun 2020 - Feb 2021

- Designed a PostgreSQL database and built a RESTful Flask API handling up to 6000 requests per minute.
- Stepped up as lead, delivering the MVP in 3 months and securing over 10,000 users by October 2021.
- Launched the mobile app in Germany and Turkey, sustaining users with ongoing feature upgrades.

EDUCATION

Northeastern University
Master's in Informatics; GPA: 3.96/4.0

Massachusetts, USA
Sep 2023 - Dec 2024

Marmara University
Bachelor's in Computer Science; GPA: 3.04/4.00

Istanbul, Turkey
Jun 2020 - Sep 2022

TECHNICAL SKILLS

Languages/Tools	Python, Uv, Ruff, PyTorch, Hugging Face Ecosystem (Transformers, Datasets, Tokenizers, Evaluate, PEFT), MLfLow, spaCy, NLTK, Docker, Django, Flask, Websocket, SQL, PySpark, Git, Pytest, Pandas, NumPy, SciPy, Scikit-learn, CI/CD, Github Actions, Azure AI, AWS
Skills	Machine Learning, Deep Learning, Generative AI, Reinforcement Learning, NLP, Prompt Engineering, Experiment Tracking, Distributed Training, Data Visualization, Agile

PUBLICATIONS

Conference Publications

- C1.** C. Erdoğanılmaz, **B. Mengunogul** and M. Balci, "Unveiling the Black Box: Investigating the Interplay between AI Technologies, Explainability, and Legal Implications," 2023 8th International Conference on Computer Science and Engineering (UBMK), Burdur, Türkiye, 2023, pp. 569-574, doi: 10.1109/UBMK59864.2023.10286653.
- C2.** C. Erdoğanılmaz and **B. Mengunogul**, "An Original Natural Language Processing Approach to Language Modeling in Turkish Legal Corpus: Improving Model Performance with Domain Classification by Using Recurrent Neural Networks," 2022 Innovations in Intelligent Systems and Applications Conference (ASYU), Antalya, Turkey, 2022, pp. 1-6, doi: 10.1109/ASYU56188.2022.9925363.

HONORS AND AWARDS

CPS Leaders and Scholars Award

May 2023

The recipient was selected by the committee in recognition of impressive academic and personal achievements, as well as the potential to leverage their degree to create a difference in the world. The award offers tuition scholarship funding, which will cover a portion of the total program tuition costs.

Best Paper Award Certificate 2nd Place

Sep, 2022

The project "An Original Natural Language Processing Approach to Language Modeling in Turkish Legal Corpus: Improving Model Performance with Domain Classification by Using Recurrent Neural Networks" has been awarded Best Paper Award 2nd Place at Innovations in Intelligent Systems and Applications Conference (ASYU 2022) September 7-9, 2022, Antalya, TURKEY.

BlockFellow Hackathon 2019

Feb, 2019

Developed a supply chain tracking system with blockchain technology. The project selected in top 10 among hundreds of projects from 15 Universities at first blockchain hackathon in Turkey.

GRANTS

Erasmus+

Aug 2021

By the European Commission, a grant was awarded to undertake an internship in Germany, where practical experience was gained and language and cultural skills were improved.