ERDEM ÜNAL

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OBJECTIVE

As a Data Engineer with 5+ years of experience in software development, I've been working in various DevOps Engineering and ML Engineering tasks like Cloud Migration, Business Data Analytics, Scheduled Data Pipelining, AI Music Information Retrieval - Tagging - Similarity, Project Management, Automated Rollback and Deployment Management, I'm looking for a full-time (Senior) ML-Ops Engineer / Data Architect position where I can tackle in more challenging and rewarding tasks.

SKILLS

Essentials	Python, SQL, Git, Bash, Terraform, Docker, GCP, Visual Studio Code
Google Cloud Components	Bigquery, Looker, Build, Compute Engine, Dataproc, Function, Load Balancing, Scheduler, Stackdriver, Storage, Vertex AI, VPC, Workflows
Data Engineering Tools	Apache Spark, Apache Airflow, SAP BW, Excel, PostgreSQL-MySQL, Data Ingestion and Warehousing, ELT pipelineing, CI-CD Workflow
Deep Learning	RNNs, CNNs, Generative Networks (GANs, VAEs, Flows), Autoregressive Models, Fairness, Pattern Recognition, Unsupervised Outlier Detection
Soft Skills	Responsible, Innovative, Open-Minded, Non-stop Learner, Critical Thinker

EXPERIENCE

Data Engineer — Full Time, Apr 2022 - Ongoing
BMG - The New Music Company — *Berlin, Germany*

- ELT connection from SAP BW to Bigquery
- Worked as an ML Engineer in Music Similarity, Tagging and Information Retrieval tasks targeting BMG Music Catalogue
- CI-CD pipeline using Bitbucket, Cloud Build, JIRA, Confluence
- Automated cloud operations (resource management, IAM control) using Terraform and GCP

Research Assistant — Part Time, May 2021 - Apr 2022
DiscoRet — *Dresden, Germany*

- Participated in research studies and published "Enhancing Fairness of Visual Attribute Predictors" in ACCV Conference.
- Research topics: Fairness, Robust Generative Models (VAEs, GANs, INNs), Latent Space manipulation, Hyper-parameter optimization, Neural Architecture Search, AutoML
- References available upon request (Nishant Kumar) (Dmitrij Schlesinger)

Python Programmer — Part Time, Dec 2019 - May 2020
Helmholtz-Zentrum Dresden-Rossendorf — *Dresden, Germany*

- Designed a UNIX command line tool that queries popular AI hubs for pre-trained weights of a given architecture
- References available upon request (Dr. rer. nat. Peter Steinbach)

C++ Programmer — Part Time, Dec 2019 - May 2020
TU Dresden CGV — *Dresden, Germany*

- Applied ray tracing algorithms to further improve a Virtual Reality project using OpenGL and C++
- References available upon request (Prof. Dr. Stefan Gumhold)

EDUCATION

Master of Science: Visual Computing 2019-2021
Department of Computer Science - Dresden University of Technology
Thesis: Out-of-distribution Detection for Microscopic Imaging
Publication: Enhancing Fairness of Visual Attribute Predictors
Topics: Deep Learning, Computer Vision, Computer Graphics, High Performance Computing, Data Visualization

Bachelor of Science: Electrical and Electronics Engineering 2014 - 2017
Department of Engineering - Bilkent University
Final Project: LocInCampus - 2D outdoor localization system independent of GPS functioning in Bilkent University Campus borders
Topics: Telecommunications, Computational Neuroscience, Digital Signal Processing, Statistical Learning and Data Analytics, Reinforcement Learning, Computer Networks, Embedded Systems
- Bilkent IEEE Student Branch Active Member (2014-2016)
- Algorithms & Programming Course (JAVA) Grader and Tutor (2015-2017)

PROJECTS (GITHUB LINK)

Real-Time Video Segmentation (2021) Segmentation models trained on water images and then further transformed into CoreML environment and realtime mobile compatible water segmentation app is developed.
Techs: Python, PyTorch, Kaggle, ONNX, CoreML, Swift, Metal

ImageCluster (2021) Image clustering algorithm based on MPEG-7 Color Layout Descriptor using Java.

VR-Mesh View (2020) A Virtual Reality environment where you can load meshes and play with them.
Techs: C++, OpenGL, Steam VR, Visual Studio

DeepDoom (2018) A self defender algorithm for the popular gaming franchise Doom by using the essentials of reinforcement learning and Q-learning.
Techs: Python, Java, PyTorch, Kaggle, NetBeans

New York Times 5x5 Mini Crossword Puzzle Solver (2018) Machine learning project that solves the daily posted mini crossword puzzle at New York Times website based on the given clue
Techs: Java, JavaScript, HTTP5, Selenium, Eclipse, Sublime Text

Space Shooter Game (2016) VHDL based shooting game using Basys3 FPGA board and VGA monitor.
Techs: VHDL, XILINX ISE Design Suite

Bilgiman Project (2016) Design of the backend database and website of Bilgiman Co. Ltd
Techs: C++, PHP, MySQL, HTML5, JavaScript, QT Creator, Sublime Text

BilShare (2015) Mobile based Android e-commerce application that lets students of Bilkent University sell, buy or borrow their goods and products
Techs: Java, Android, MySQL, HTML5, JavaScript, PHP, Android Studio

LANGUAGES

- English: *Fluent*
- German: *Intermediate*
- Turkish: *Native*

CERTIFICATES

- Received Merit Scholarship from Bilkent University (2016-2017)
- TOEFL IBT: 90/120 (2018)
- Awarded Fit (Sports) Challenge 1st Place (2018-2019)
- Bilkent Under Water Community 1* Scuba Diver (2016-2017)