BERK AYDAŞGIL

PROFILE

Computer engineer specialized in big data systems and AI. Have a passion for creating tooling and automating. Love writing technical reports and papers. Accustomed to project sprints that are 2 to 8 weeks long and involve taking responsibility for one's work.

EXPERIENCE

Universiteit van Amsterdam & Vrije Universiteit   📍 **Amsterdam, NL**

MASTER'S FINAL PROJECT AND LITERATURE REVIEW   JAN 2021 - AUG 2021

- Did my master's thesis on the topic of benchmarking and scaling biomedical image segmentation task under U-net architecture. Designed and implemented an end-to-end deep learning benchmark to analyze U-net scalability with various distribution models.
- Wrote a systematic literature review on deep learning benchmarking that included studies from 4 to 5 years to capture the most recent progress in the field.

  `Semantic Image Segmentation` `Deep Learning` `U-net` `Gpipe` `Horovd` `DAS5` `PyTorch` `Python`

Universiteit van Amsterdam & Vrije Universiteit   📍 **Amsterdam, NL**

MASTER'S COURSES   SEP 2018 - DEC 2019

- Implemented an end-to-end large-scale data pipeline to detect illegal buildings in the Netherlands. Processed 1.5 terabytes of point cloud data and used a convolutional neural network and public real-estate registration data for the detection. Created a visualization to display the results of the research on the map.

  `AWS` `SURFSara` `Hadoop` `Spark` `Tensorflow` `Python`

- Worked on entity linking. Linked Wikidata entities to a knowledge base hosted on an Elastic Search endpoint. Created greedy and then later more elaborate strategies to achieve higher accuracy. Finally to increase the performance, scaled this project using Apache Spark.

  `Natural Language Processing (NLP)` `Elastic Search` `Spark` `Spacy`

- Designed and implemented a distributed sorting algorithm on AWS, Vultr, and DAS5 clusters. Compared the alternatives for algorithms and designed for high performance, strong scalability, and fault tolerance features. Finally reported cost and performance findings and comparisons for AWS and VUltr Cloud services.

  `OpenMPI` `AWS` `Vultr` `C++`

- Designed a software system called Berichtenbox (Message Box) for MijnOverheid (MyGovernment). Which involved incorporating services of several government organizations under one managed platform for the citizens. Did requirements engineering and created views that incorporated different interests of business and technical stakeholders. Hold multiple sessions with stakeholders at different stages of the project to capture different aspects and to finalize the report.

  `Requirements Engineering` `Software Architecture`

- Participated in weekly sessions in which I worked on designs, presentations, and seminar discussions relating to distributed systems. Designed and iterated on my design works in a weekly schedule which would be finalized with a presentation to discuss the work I have done with my colleagues. Some goals for these design sessions ranged on the topics such as systems consistency, performance scaling, fault tolerance, and resource management.

  `Distributed Systems Architecture`

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📍 Amsterdam

SKILLS

Programming: Python, Java, C++, Javascript, SQL, Bash
Frameworks: Spark, Hadoop, Kubernetes, Kafka, Flask, Django
Developer Tools: Git, Docker, Github Actions, Wireshark, Anaconda environment, Linux software
Databases: Redis, Cassandra, PostgreSQL, Elastic Search
Application Servers: Apache Tomcat, Glassfish
Misc: D3.js, Jupyter Notebook, LaTeX

LANGUAGES

Turkish	Native
English	Bilingual/ C2
German	B1

INTERESTS

Technical writing   Blogging
Playing guitar   Composing music
Learning languages

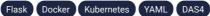**Universiteit van Amsterdam & Vrije Universiteit** 📍 **Amsterdam, NL**

MASTER'S COURSES (CONT.) SEP 2018 - DEC 2019

- Scaled a Flask-based web service on DAS4 cluster using docker containers. Configured its orchestration and the underlying network. Finalized this work by writing a literature review on computer clouds and peer-to-peer networks.

Flask Docker Kubernetes YAML DAS4

- Created an interactive information visualization system for exploring the link between crime and socio-economic status in Amsterdam City Area.

D3.js Javascript

- Worked on various data mining and machine learning projects, on topics such as hotel booking search ranking, mobile phone usage effects over patient mood, assessing quantified self data of sport or daily activities.

Machine learning Data mining

University of Economics 📍 **Izmir, TR**

BACHELOR'S FINAL PROJECT JAN 2017 - JUN 2017

- Did my bachelor's thesis on image super-resolution that inferred higher resolution space via sparse coupled dictionaries.

Image Super Resolution Machine Learning MATLAB

University of Economics 📍 **Izmir, TR**

BACHELOR'S COURSES SEP 2013 - JUL 2017

- Took courses on operating systems, algorithms and data structures, software design patterns, cryptography, embedded systems.
- Also took out of the field, business related courses, one of which was about creating a startup. It led me to pitch my mobile app startup idea to angel investors.

Python C/C++ Wireshark

Baknet, Bakioğlu Holding 📍 **Izmir, TR**

INTERNSHIP JUL 2016 - AUG 2016

- Worked on Canias ERP software. Gave a presentation on a technical topic of my choice. Observed and experienced waterfall methodology.

Canias ERP Waterfall

BilgeAdam Technologies 📍 **Izmir, TR**

MICROSOFT DEVELOPER BOOTCAMP JAN 2014 - JUN 2014

- Participated in a Microsoft certified developer Bootcamp, that incorporated technologies involving desktop, web, and mobile platforms.

.Net ASP.NET Microsoft SQL Server C#

EDUCATION

MSc in Computer Science

Universiteit van Amsterdam & Vrije Universiteit

SEP 2018 - AUG 2021

Specialised in big data technologies.

BSc in Computer Engineering

University of Economics

SEP 2013 - JUL 2017