Curriculum Vitæ

Daniel David Kovacs

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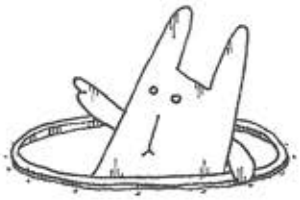
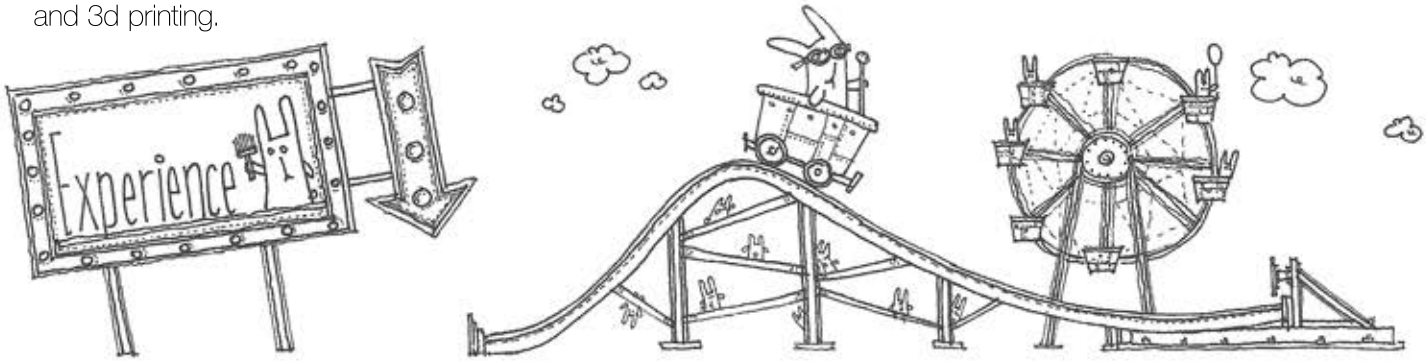


I am an ambitious solution architect and lead developer with focus on data; an efficient and motivated learner; I have experience with mentoring, interviewing, distributed architectures, microservices, event-driven architectures, data platforms, data catalogs, data as a product, machine learning and ml-ops.

I have expertise in Python, Scala, Java, API design, AWS, Azure, Airflow, Kafka, RabbitMQ, ZeroMQ, Confluent stack, Data as a product, Data Lake, Data Lakehouse, Data catalogs and Data Lineage, Databricks, Hadoop, PostgreSQL, CosmosDB, Cassandra, DynamoDB, Neo4J, Slick, SqlAlchemy.

Skilled in Data Platform Engineering, AI & ML Strategy, Modern Architecture, NoSQL Databases, Python Data Science Ecosystem, Python, MQTT, Scala, Autodesk Fusion 360.

I have a keen interest in machine learning, visualisation, computational graphs, visual arts, 3d graphics, 3d modelling and 3d printing.



Feb 2023 – Present
Senior Solution Architect for a global reinsurance leader

Designed and lead implementation of a data ingestion platform. Solution has achieved efficiency through automating business record creation from emails between insurance brokers and underwriters.

- Created cloud native serverless architecture in Azure with a data model, that scales seamlessly to multiple future insurance domains. This allows an ever growing portion of the business to benefit from the platform.
- Authored Software Architecture Documentation, which guided sponsors to green-light the project; it was the vehicle for communicating with technical stakeholders, and navigating the project quickly and successfully through the strict in house review and governance process.
- Defined work breakdown structure, provided accurate estimations, serving as a foundation for efficiently forming a cross functional project team, and delivering on time despite short deadlines.

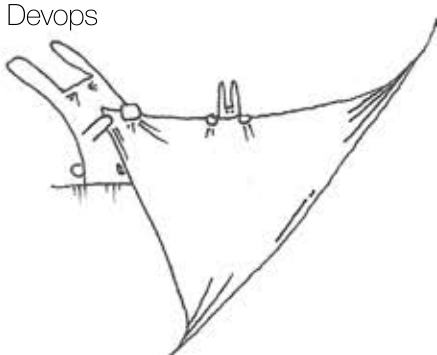
Event Sourcing, Azure Function Apps, Event Grid, Entra ID, CosmosDB, Key Vault, Spring Cloud Function

Sep 2022 – Feb 2023
Lead Data Engineer for Industry-leading Swiss insurer

Designed and implemented improvements to an existing Python-based in-house data transformation pipeline used by actuarial team for insurance risk management.

- Designed migration of the framework backend from Pandas to Polars, facilitating continued tool utilization, offering early benefits of improved model execution times.
- Designed new DAG visualisation backend with GraphViz, significantly accelerating the development cycle for insurance models.
- Implemented data quality tooling to enhance model reliability.
- Migrated job runs to Azure ML, cutting down execution times from hours to minutes.

Python, Numba, Pandas, Polars, Azure ML, Data Lake, Blob Storage, Docker, Azure Devops



Nov 2021 – Apr 2022

Solution Architect for a business information company

As a solution architect I took part in the productisation of an industrial computer vision application controlling and monitoring conveyor belts for mining contaminants, and providing reporting dashboard for ore statistics.

- Assumed role of Solution Architect in a red project status, tasked to produce a quality Solution Architecture Document, and to design for additional requirements. Timely delivery of the artefacts was key in a positive project assessment.
- Designed a sampling image processing pipeline on top of ZeroMQ, replacing the original monolithic solution. Decoupling the computer vision component enabled a tenfold performance gain.
- Defined software development process, fostered a culture of effective communication and cooperation, resulting in a cohesive project team and contributing to the project's overall success.

Python, PostgreSQL, SQLAlchemy, RabbitMQ, ZeroMQ, OpenCV, MLflow

Jan 2021 – Dec 2021

Lead Data Engineer for leading health tech. company

Migrated big data pipelines from Cloudera CDH platform to AWS EMR Hadoop cluster.

- Implemented Oozie workflow migration from CDH to AWS. Despite challenging documentation, complex workflows, and slow development cycle, I have delivered over expectations, contributing to the team's meeting of commitments.
- Designed testing tools to streamline development process, strengthen confidence in the delivered solution, and contribute to the overall success of the project.
- Developed extensive documentation for an in-house framework lacking proper documentation. This has increased efficiency of development.

Java, Python, Oozie, Vertica, Hue, Hadoop, AWS EMR, S3, EC2, Zookeeper, HDFS

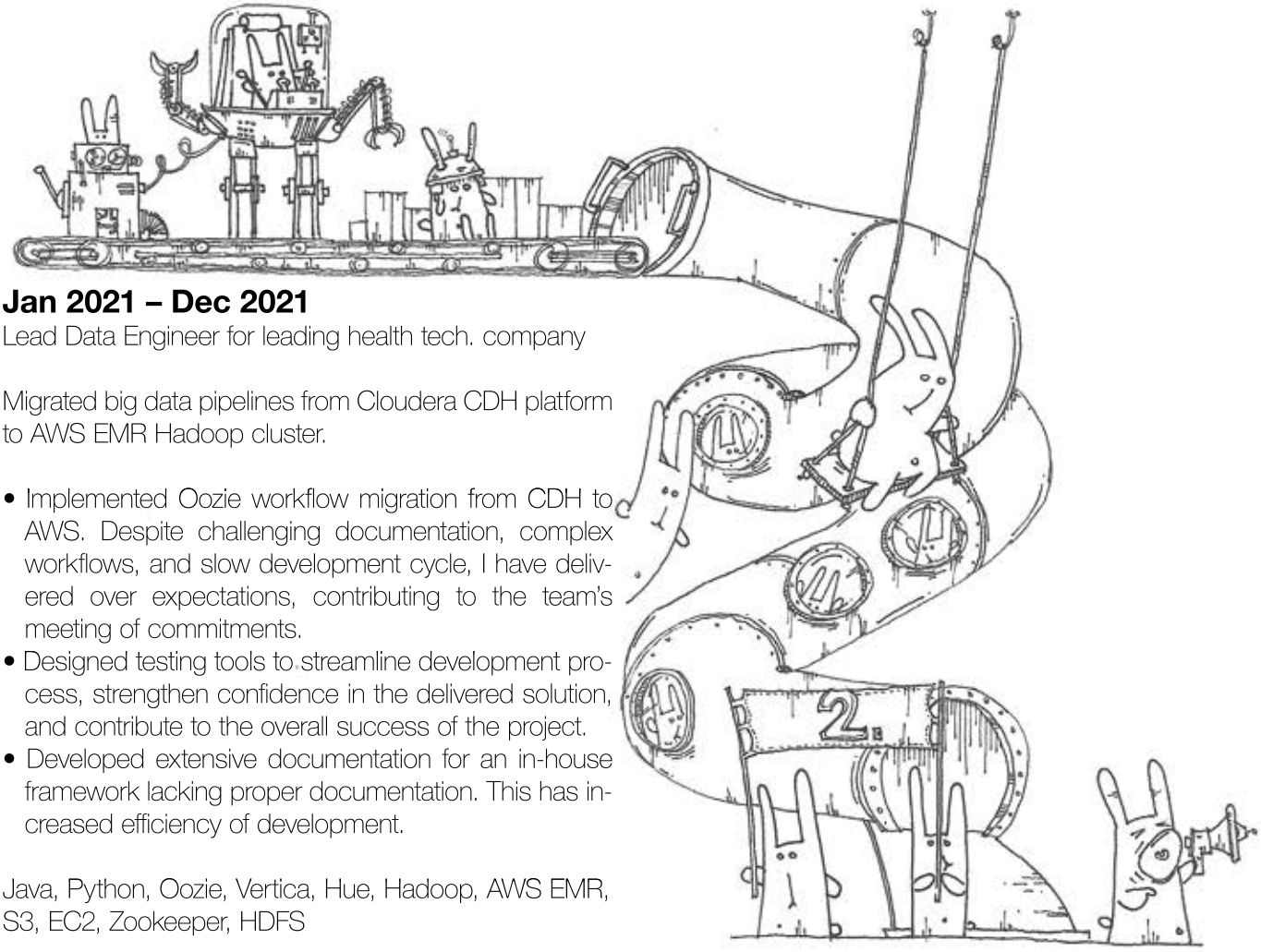
Mar 2020 – Dec 2020

Lead Data Engineer for global pharmaceutical company

As a data engineer I have worked on a data platform for drug research and discovery process that enables integration to analytical tools and provides data integrity and provenance. The value is efficiency, improved decision making, decision capture, and data lineage.

- Designed and implemented a Python DSL for a scalable developer experience for ingestion schemas, transformations, and lineage cataloging, significantly reducing learning curve, and resulting in scaling up development of ingestion pipelines
- Implemented data quality control enhancing overall data quality and paving the way for future automation
- Optimised execution performance with async processing, multithreading, and alternative runtimes, resulting in increased efficiency and a substantial reduction in runtime costs.
- Introduced Poetry to streamline development process, minimizing dependency-related errors.

Python, Pypy, Airflow, PostgreSQL, Neo4J, Poetry

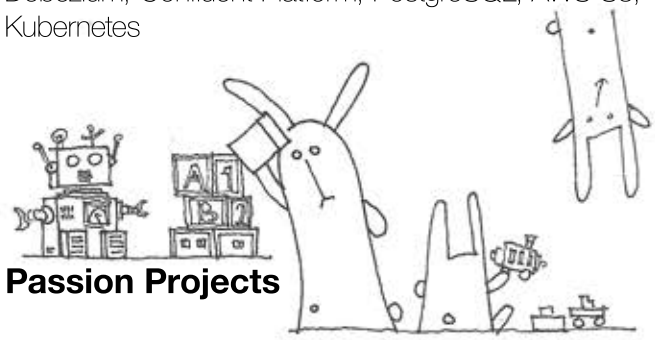


May 2019 – Mar 2020
Lead Data Engineer for a leading mobility provider

As a data engineer I have worked on a self service data discovery platform.

- Implemented robust data pipelines with Debezium, to migrate data from MySQL to data lake via Kafka. This has removed a scalability bottleneck, and improved overall data accessibility and empowered users to derive insights promptly, contributing to more informed decision-making processes.
- Shifted data pipelines from AWS ECS to EKS, which enhanced the overall efficiency, and aided in delivering timely data processing capabilities.

Scala, Play Framework, Python, Lenses, Slick, Kafka, Debezium, Confluent Platform, PostgreSQL, AWS S3, Kubernetes



Passion Projects

- LinkedIn Scraper | Python, Selenium, Pandas
- Python core and data engineering training material
- In-code defined computational graphs with visualisation
- Distributed data logger and dashboard | Raspberry Pi, ESP8266 MicroPython, PostgreSQL, Graphana
- Covid statistics web scraper and dashboard | Python, Selenium, Pandas, Bokeh
- Smart compass | Arduino, Gps, Accelerometer
- Non-photorealistic rendering with hatching

Employment

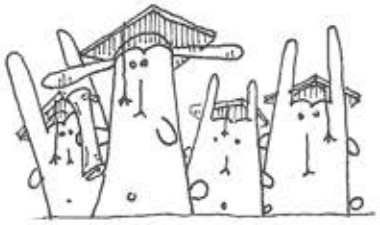
- 2014 – 2021 EPAM Systems Hungary
- 2021 – Present EPAM Systems Switzerland

May 2014 – May 2019
Junior Software Engineer – Lead Software Engineer for a prominent online travel platform

As a software engineer I have worked on the mobile backend services for native applications. From 2016 I have assumed the responsibility of development team lead.

- Improved development process, fostered collaboration in the development team, and an innovative atmosphere, which not only elevated the teams profile, but also inspired changes within the greater project
- Lead innovative experiments, such as a chatbot interface, improved map search for public transportation and personal choice of POIs, monitoring and alerting with anomaly detection, which have lead to an increased surface for business opportunities

Java, Maven, Spring Boot / Cloud Stream / Data / Aop, Grafana, Apache ActiveMQ, Kafka, Cassandra, Docker, Kubernetes, Helm



Education

- 2013 Budapest University of Technology: BSc in Software Engineering
- 2007 Budapest University of Technology: MSc in Architecture and Engineering
- 2004 Högskolan Dalarna, Sweden: Master of Solar Energy Engineering

Languages

- Hungarian – native
- English – C2
- German – B2