Ladislav Šulák

SOFTWARE & DATA ENGINEER · PYTHON, CLOUD, & BIG DATA

Holečkova 177, 150 00 Prague, Czech Republic

☐ (+421) 902 252 390 | ✉ laco.sulak@gmail.com | ⬛ lsulak | ⬛ ladislav-sulak

Summary

Software and data engineer with more than 6 years of experience, focusing on developing and employing reliable, scalable, and maintainable systems. Back-end development in Python, AWS, Relational and NoSQL DBMS systems, with an interest in practically all aspects of the Software Development Life Cycle. Also:

- Beyond data engineering, some knowledge of data analytics and data science.

- Passionate about CI/CD and IaC, clean code, design patterns, SOLID principles, suitable design and architecture, and high-quality software in general.

Work Experience

Ecotricity
Bristol, England

LEAD DATA ENGINEER
June 2021 - January 2022

- I led a small data engineering unit, with responsibilities ranging from technical ownership, product ownership, and team ownership. I was driving the whole software development life-cycle, which included consulting, delegating, or actively executing individual parts of the SDLC. Also, I facilitated all the Scrum meetings.

SENIOR DATA ENGINEER
October 2020 - June 2021

- Additional responsibilities involved coaching junior engineers, having greater ownership over internal and business projects, and communicating more with the key stakeholders.

DATA ENGINEER
October 2019 - October 2020

- Being an early member of a growing data engineering function that was continuously enabling data democratization and data literacy within the organization. Also, we developed many internal products requested by stakeholders from various parts of the company.
- Our approach primarily involved Python and Spark-based data pipelines deployed to the AWS, but some of our resources were deployed on-premises.
- As our team reached a more mature state, I developed many reusable components and previously not existing automation, which led to faster development and higher-quality products. I put a big emphasis on doing peer reviews, writing tests and documentation, applying best practices, implementing CI/CD and IaC, and sharing the lessons within the team and, if relevant, also with a broader audience in the company. Some of our products reached more than 90% of the test coverage and we could easily have multiple deployments per day.
- I continuously tried to identify gaps and more challenging technical problems in regard to my team's responsibilities and beyond. Many technologies we were using were relatively new and this sometimes required doing research, writing PoCs, and being innovative and curious in general.
- **Tech stack:**
  - Python 3: PySpark, Pandas, Jupyter, Great Expectations, Boto3, Troposphere, Conda, Black, Pylint, Pytest, ...
  - On-premise: MS-SQL and (Power/Bash)Shell
  - Cloud: Databricks and AWS: S3, Glue, DMS, Athena, DynamoDB, Lambda, SageMaker, CloudFormation, ...
  - Environment & CI/CD: Linux/WSL, Docker, AzureDevOps, BitBucket and GitHub

ICT & MEDIA, s.r.o.
Brno, Czech Republic

SOFTWARE DEVELOPER
January 2019 - August 2019

- Designed and developed a back-end of a threat intelligence platform. Responsibilities went from a low-level point of view, such as code quality, to a high-level point of view, such as choosing the right frameworks, software architecture, and active consultation of requirements with a remote project manager.
- Actively participating in technical interviews for bringing new people in. Wrote a practical assignment and interview test for a python developer position.
- Gave a lot of practical advice and put a great emphasis on the overall quality of the project.
- Developed a testing framework that resulted in much easier testing and thus higher coverage (more than 90% overall).
- **Tech stack:** Python 3 (Celery, Pipenv, Black, Pylint, Pytest, Protobuf), PostgreSQL, SQLite, Linux, Docker, and GitLab.

CYAN Research & Development s.r.o.
Brno, Czech Republic

SOFTWARE DEVELOPER AND ANALYST
July 2016 - December 2018

- Participating in building back-end of a bigger system for detecting internet fraud, such as malicious web servers, and web-based phishing.
- The nature of the work was not just the design, development, and maintenance of software systems, but also domain expertise, and research.
- Helped the company with a lot of research ideas and practical applications, such as a module that stored a high amount of domains generated from domain generation algorithms hidden in malware. Because of this, the customers were more protected against C&C attacks.
- Occasionally volunteered on having a tech talk about certain topics, and current technical problems so that they would not be repetitive.
- **Tech stack:** Python 3 (Scrapy, Numpy, Scikit-learn, Keras), Bash and various Linux tooling, PostgreSQL, Grafana, Ansible, Yara, and GitLab.

Education

Brno University of Technology, Faculty of Information Technology *Brno, Czech Republic*

MASTER DEGREE PROGRAMME: INFORMATION TECHNOLOGY SECURITY *2015 - 2018*

- The study program was focused on a deeper understanding of information systems security, cryptography, data transfer, coding, and biometrics.
- Master's thesis: Detection of Malicious Websites using Machine Learning.

Technological Educational Institute of Crete, School of Engineering *Crete, Greece*

ERASMUS STUDIES *2017 - 2018*

- This study was focused on computational intelligence and research methods.

Brno University of Technology, Faculty of Information Technology *Brno, Czech Republic*

BACHELOR DEGREE PROGRAMME: INFORMATION TECHNOLOGY *2012 - 2015*

- The study aimed to design, implement, and administrate computer systems, digital systems, computer networks, computer-based systems, database systems, and information systems.
- Bachelor's thesis: Metrics for Buffer Overflow Attacks Detection of UDP Network Services.

Publications

Features for Behavioral Anomaly Detection of Connectionless Network Buffer Overflow Attacks

IVAN HOMOLIAK, LADISLAV ŠULÁK, AND PETR HANÁČEK *March 2017*

Information Security Applications. WISA 2016. Lecture Notes in Computer Science, vol 10144. Springer, Cham

Certificates

Pluralsight *Ryan H. Lewis*

AWS DEVELOPER *December 2019*

Course details: `https://www.pluralsight.com/authors/ryan-lewis`

Coursera *Andrew Ng, deeplearning.ai*

DEEP LEARNING SPECIALIZATION *January 2019*

Course details: `https://www.coursera.org/specializations/deep-learning`

Coursera *Andrew Ng, Stanford University*

MACHINE LEARNING *November 2018*

Course details: `https://www.coursera.org/learn/machine-learning`

Languages

English Full professional proficiency
Slovak Native or bilingual proficiency
German Elementary proficiency