Ladislav Šulák

Software Engineer · Python · Machine Learning · Database systems · Linux

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Summary

Software engineer with more than 4 years of experience, focusing on back-end programming in Python and with the interest in machine learning. Worked in smaller start-ups, in an R&D team as well as in a bigger company. Also:

- PostgreSQL enthusiast, and except few other SQL systems, experiences with MongoDB.
- Knowledge of Git version control system, Docker/podman, Grafana, Linux scripting (anything from smaller to bigger bash modules including their testing with Bats testing system), C/C++, C#, and more.
- Passionate about CI, clean code, design patterns, SOLID principles, suitable architecture, and quality in general.

Experience

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

Software Developer *January 2019 - August 2019*

- Designed and developed a threat intelligence platform. Responsibility 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 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.

IXPERTA *Brno, Czech Republic*

Software Developer *March 2015 - December 2015*

- Successful migration of a client-server application from .NET 2.0 to .NET 4.5. This was done by replacing obsolete libraries and other parts of the system. Dedicated to the client part migration, that visualized incoming data (memory leaks on remote machine).
- Implementation of a module that replaced an older non-functional Windows USB driver. The final solution was more lightweight, maintainable, and reliable.
- **Tech stack:** Mostly C# on .NET platform (occasionally also C/C++), Libusb and various USB monitoring tools, Subversion and ClearCase.

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

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