








Nedko Nedkov

Backend Engineer

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Warsaw, Poland 
Bulgarian 

EMPLOYMENT

European Organisation for Nuclear Research (CERN)
Backend Engineer

Mar 2018 – Feb 2020
Geneva, Switzerland 

Working on monolithic legacy application used for monitoring and performing diagnostics on SCADA applications and infrastructure. Migrating its UI (codebase of >100k LOC) to a custom Grafana instance (codebase of <3k LOC) and fragmenting parts of its backend to microservices. As a result, hundreds of hours in maintenance were saved and the UI usability improved significantly.

Technologies: Python, InfluxDB, JavaScript, Oracle SQL, Docker, Ansible, Elasticsearch, Bash

Motius, GmbH
Backend Engineer

May 2017 – Feb 2018
Munich, Germany 


Project 1 - Developing the back-end of a platform offering IoT solutions for smart cities. Responsibilities included selection of technologies/protocols/database systems and REST API design.

Technologies: Python, Ansible, InfluxDB, PostgreSQL, Docker, Flask, MQTT, Bash

Project 2 - Backend software development for a mobile football betting app.

Technologies: Python, Django, PostgreSQL, Docker, Bash

Simplinic, GmbH
Working Student

Dec 2016 – May 2017
Munich, Germany 

Design and implementation of business logic for a real-time indoor localization system that operates on Bluetooth LE.

Technologies: Python, C, Bash, MQTT, JavaScript, jQuery, D3.js, HTML


Magazino, GmbH
Master Thesis Student

Apr 2016 – Dec 2016
Munich, Germany 

Constructing predictive models with the aid of Supervised Machine Learning based on data found in the execution logs of an autonomous robotic system. The models aimed to predict the success of an action before its execution and identify decalibration of the 3D vision system of the robot.

Technologies: Python, ROS, PostgreSQL, Scikit-learn, Django, SQLAlchemy, Bash


Cisco Systems, Inc
Software Engineering Intern

Aug 2015 – Sep 2015
Oslo, Norway 

Developing an Outlook plugin which performs user authentication via OAuth2 and uses an existing REST-based API to manipulate metadata regarding video collaboration meetings (Webex).

Technologies: C#, Microsoft .NET Framework


French Institute for Research in Computer Science (INRIA)
Research Intern

Apr 2014 – July 2014
Nice, France 

Post-processing a dataset of 10 million DNS lookup traces with the aid of Hadoop. In a following stage, evaluating analytical models which predict the performance of TTL-based caches.

Technologies: Python, Bash, Git, LaTeX, Hadoop, MATLAB

European Organisation for Nuclear Research (CERN)
Technical Student

Oct 2012 – Nov 2013
Geneva, Switzerland 


Backend software development for the author disambiguation module of INSPIRE-HEP. Enriching RESTful API - User authentication to a 3rd-party service via OAuth2 - Implementing an approximate string matching engine for author names - Substantial refactoring of existing codebase.


Technologies: Python, MySQL, Bash, HTML

TECHNICAL SKILLS

Programming Lang.: Python, C/C++, JavaScript, Go, Prolog, Haskell
Database Systems: SQL (PostgreSQL, MySQL, Oracle), NoSQL (InfluxDB, ES, MongoDB)
Container Tech.: Docker (incl. docker-compose), Kubernetes ([CKAD certificate](#))
Cloud Services: AWS (AWS Certified Developer certificate ongoing)
Frameworks: Flask, Django, SQLAlchemy, jQuery
Other: Ansible, Bash Scripting, Linux Kernel Programming, L^AT_EX, HTML, CSS
Software: Git, Vim, GitLab CI/CD, Hadoop, ROS, Scikit-learn

EDUCATION

MSc in Informatics - Technical University of Munich Oct 2014 – Jan 2017
2-year degree (120 ECTS) - GPA: 1.8 (German grade scale) Munich, Germany 
Received DAAD scholarship due to excellence in undergraduate studies
Thesis: Employing predictive models based upon execution logs of autonomous manipulation robots

BSc in Informatics - University of Athens Sep 2007 – Aug 2014
4-year degree (242 ECTS) - GPA: 8.85/10 (ranked 2nd best in my year) Athens, Greece 
Thesis: Approximate string matching with edit distance constraints [view](#)

Exchange student - Aalto University Jan 2011 – June 2011
Received EU fellowship (Erasmus) Espoo, Finland 

PUBLICATIONS

Performance models for hierarchy of caches: Application to modern DNS caches
in Performance Evaluation, 2016 by Sara Alouf, Nicaise C. Fofack & Nedko Nedkov [view](#)

LANGUAGES

English - Fluent **Greek** - Native **Bulgarian** - Native
French - Conversant **German** - Beginner

PET PROJECTS

Linux Kernel Rootkit (v4.1.10 - x86.64)
Developing Linux kernel rootkits that come as LKMs (Loadable Kernel Modules). The rootkits manipulate kernel data structures and hook system calls in order to achieve tasks such as keylogging, process/file/module/socket/packet hiding, intercepting network traffic etc.
Technologies: C, Bash [view code](#)

STRENGTHS

- Highly adaptable in new environments (I have been a resident of nine different countries: Bulgaria, Cyprus, Greece, Finland, Switzerland, France, Germany, Norway and Poland)
- Experience in versatile IT domains (web backend, DevOps, IoT, robotics, control systems, supervised machine learning)