Nedko Nedkov

Backend Engineer

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GitHub

LinkedIn

Warsaw, Poland

Bulgarian

EMPLOYMENT

European Organisation for Nuclear Research (CERN) Mar 2018 – Feb 2020
Backend Engineer 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

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Motius, GmbH May 2017 – Feb 2018
Backend Engineer 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 Dec 2016 – May 2017
Working Student 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 Apr 2016 – Dec 2016
Master Thesis Student 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

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Cisco Systems, Inc Aug 2015 – Sep 2015
Software Engineering Intern 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) Apr 2014 – July 2014
Research Intern 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)   Oct 2012 – Nov 2013
Technical Student   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, LaTeX, 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)