Daniel **Kneipp**

Senior System Engineer

Contact

+31 6 16 11 35 47
daniel.kneipp@outlook.com

in://daniel-kneipp
github://DanielKneipp
gitlab://DanielKneipp

Languages

Brazilian Portuguese
[Mother tongue]
English
[Professional working proficiency]

Programming

Python, Bash,
C++, Go, R

Skills

Cloud Infrastructure:

DevOps:

Machine Learning:

Computer Vision:

Back-end Dev:

About me

I'm a DevOps Engineer with over 9 years of professional experience working with Computer Vision, Machine Learning and Cloud Infrastructure. I also have a Master's degree in Computer Science to aggregate theoretical knowledge to the practical experience.

Currently I'm working as a Site Reliability Engineer (SRE), designing cloud architectures for microservices workloads and guiding teams of Developers and new DevOps Engineers to deliver robust software and maintain high available services.

Experience

2021–Now **Senior System Engineer** *Backbase – Netherlands*

- Developed and supported automation pipelines with Jenkins and Github Actions;
- Conducted workshops and knowledge sharing sessions regarding DevOps culture and tooling to support developers across several teams (focus on local development/testing for cloud-native solutions);
- Provisioned SaaS environments with restoration mechanisms to the compute and storage layers to be served as a reference working API for the whole company (trainees and developers);
- Supported pipelines of projects in Java, Javascript, Typescript and Go for multiple teams with automated interactions with Helm, Terraform, Jfrog, Kubernetes and custom internal tooling.

2019–2021 **Site Reliability Engineer** *MOST Specialist Technologies – Brazil*

- Designed automated packing and testing processes of containerized services with Gitlab pipelines, improving update rate from weakly to daily;
- Blue-Green deployments and Rolling releases with AWS EC2, Fargate, ECS and CloudFormation;
- Deployed and maintained a monitoring system and request tracing with Elastic Stack (Elasticsearch and Kibana), reducing the time of incident response from hours to minutes;
- Infrastructure automation using Ansible to configure ephemeral development instances, Packer for automated AWS AMIs creation and Terraform for the infrastructure provisioning.

2017-2018 **Machine Learning Engineer** *MOST Specialist Technologies – Brazil*

- Developed ML algorithms for document detection in images and ID recognition (demo available at mostqi.com);
- Developed back-end services in Python and Go to serve real-time inferences;
- Worked with document classification and clustering using its textual content;
- Used Data Engineering and Data Visualization concepts for data preparation, cleaning and labelling unification;
- Developed tools for training management and performance monitoring regarding accuracy and hyper-parametrization.

2016–2017 **Computer Vision Researcher** *Invent Vision – Brazil*

Deep Learning research for Computer Vision applications. Implemented a set of tools to speedup the development (e.g. synthetic dataset generation, dataset management, etc.) and deployed image classifiers in embedded systems (NVIDIA Jetson).

2015–2016 **Computer Vision Intern** *Invent Vision – Brazil*

Research and provisioning of distributed computing systems (based on Hadoop and Spark), developing simple applications made to run across clusters.

2013–2014 **Undergraduate Researcher** *Invent Vision – Brazil*
Development of an efficient drowsiness detector based on face expressions (using face and eye tracking algorithms). Deployment made on x86 computers and ARM embedded systems.

Education

2016–2018 **Master** of Science *Federal University of Minas Gerais (UFMG)*
Comptuer Science – NanoComp lab. member (http://www.nanocomp.dcc.ufmg.br/).
My research area was DNA Computing. The objective was to propose functional chemical circuits for classification tasks using Chemical Reaction Networks theory as a programming language and DNA strands as the hardware. One of the results of my research is a R package to simulate logic circuits based on DNA. See https://github.com/DanielKneipp/DNAr to know more.

2012–2015 **Bachelor** of Science *Federal University of Viçosa (UFV)*
Computer Science
I received the Presidente Bernardes Medal for my academic excellence. In my undergraduate thesis I developed an algorithm based on a bio-inspired meta-heuristic to solve a combinatorial optimization problem.

Awards and certifications

2021 **AWS Certified DevOps Engineer – Professional** *Amazon Web Services*

2020 **Google Cloud Platform Fundamentals: Core Infrastructure** *Coursera*

2019 **Honorable Mention** *Symposium on Circuits and Systems Design*
Award given on the 32nd SBCCI for the work titled "DNAr-Logic DNA circuit design library in R language for molecular computing".

2015 **University Medal** *Federal University of Viçosa*
The *Presidente Bernardes* Medal is awarded to students with academic excellence.

Communication skills

2017 **Oral Presentation** *Evostar Conference*
Presented the research I conducted to obtain my Bachelor's degree. It was about the usage of Genetic Algorithms to optimize and solve a multi-component combinatorial problem.

Publications

Articles in journals

Design and Test of Digital Logic DNA Systems
Renan A. Marks, Daniel K. S. Vieira, Marcos V. Guterres, Poliana A. C. Oliveira, Maria C. O. Fonte Boa, Omar P. Vilela Neto
IEEE Design & Test *38.4 (2021) pp. 94–101. 2021*

DNAr: An R Package to Simulate and Analyze CRN and DSD Networks
Daniel K. S. Vieira, Marcos V. Guterres, Renan A. Marks, Poliana A. C. Oliveira, Maria C. O. Fonte Boa, Omar P. Vilela Neto
ACS Synthetic Biology *9.12 (2020) pp. 3416–3421. 2020*

Algorithm Selection in Adversarial Settings: From Experiments to Tournaments in StarCraft
Anderson Rocha Tavares, Daniel Kneipp S. Vieira, Tiago Negrisoli Oliveira, Luiz Chaimowicz
IEEE Transactions on Games *(2018). Institute of Electrical and Electronics Engineers (IEEE), 2018*

A Comparison of Algorithms for Solving Multicomponent Optimization Problems
Daniel Kneipp Sa Vieira, Marcus Henrique Soares Mendes
IEEE Latin America Transactions *15.8 (2017) pp. 1474–1479. IEEE, 2017*

Conferences/proceedings

DNAr-Logic: A Constructive DNA Logic Circuit Design Library in R Language for Molecular Computing
Renan A. Marks, Daniel K. S. Vieira, Marcos V. Guterres, Poliana A. C. Oliveira, Omar P. Vilela Neto
Proceedings of the 32nd Symposium on Integrated Circuits and Systems Design, 2019, São Paulo, Brazil

A Genetic Algorithm for Multi-component Optimization Problems: The Case of the Travelling Thief Problem
Daniel KS Vieira, Gustavo L Soares, Joao A Vasconcelos, Marcus HS Mendes
European Conference on Evolutionary Computation in Combinatorial Optimization, 2017