Daniel **Kneipp**

Software Engineer

"Do what you can, with what you have, where you are." -- Theodore Roosevelt

Contact

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in://daniel-kneipp
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Languages

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

Programming

C++, Python, R, JavaScript, Matlab, Java, Bash

Skills

Machine Learning:

Optimization:

Computer Vision:

Text Mining:

Experience

Full time

2017–Now **Research and Development Analyst** *MOST Specialist Technologies*

Main activities:

- Clustering and analysis of textual medical records;
- Document classification based on its textual content;
- Modular deployment of solutions using Docker.

Part time

2016–2017 **Research Program** *Invent Vision*

Deep Learning research for Computer Vision applications. Implementation of a set of tools to speedup the development (including synthetic dataset generation) and deployment of image classifiers. Application deployment in embedded systems (NVIDIA Jetson). Project name: Smart monitoring system by georeferenced images for railways applications.

2015–2016 **Trainee** *Invent Vision*

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

2013–2014 **Undergraduate Researcher** *Invent Vision*

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. Project name: System for photometric inspection and automated adjustment of vehicle headlights. Project funded by CNPq (National Council for Scientific and Technological Development).

Education

2016–2018 **Master** of Science *Federal University of Minas Gerais (UFMG)*

Comptuer Science

My research area is DNA Computing. The objective is to propose functional chemical circuits for classification tasks using Chemical Reaction Networks theory as a programming language and DNA strands as the hardware. I'm a NanoComp lab. Member (http://www.nanocomp.dcc.ufmg.br/).

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. Title: A Genetic Algorithm for Multi-Component Optimization Problems: The Case of the Travelling Thief Problem.

2010–2011 **Technician's** Degree *SENAI School*
Informatics
I Studied the basics of Computer Architecture, Software Development and Network Infrastructure.

Awards

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

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

International conferences/proceedings

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