# Daniel **Kneipp**

Software Engineer

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


## Contact

119 Gloriosa st.,
Belo Horizonte, MG
305190-490, Brazil

+55 (31) 9-9605 3234
daniel.kneipp@
outlook.com

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


## 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;
- Development of object detection algorithms for ID recognition (Demo: http://www.most.com.br/mostqi/index.html)
- Modular deployment of solutions using Docker and AWS.

## 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* – 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. 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