# Bruno Roque

PLACE AND DATE OF BIRTH: Portugal — 06 October 1989

Address: Emil-Klöti-Strasse 7, 8406 Winterthur, Switzerland

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LINKEDIN: https://www.linkedin.com/in/BrunoRoque06

Website: https://BrunoRoque06.github.io

GITHUB: https://github.com/BrunoRoque06/GeneticAlgorithm

### WORK EXPERIENCE

Aug 2017 | Software Engineer at Vodafone, Glasgow

APR 2017 Development of software tools using .NET (C#, Windows Presentation Foundation), SQL, and Python in order to automate processes. Improved the Drop

Call Rate of northern areas in the UK by more than 30%.

Mar 2017 | Software Engineer R&D at Celfinet, Lisbon

OCT 2015 Software development using .NET (C#), and Test Driven Development. Research on algorithms of geolocation of mobile network traces using radio frequency propagation models. Improved the geolocation error of 278 meters to

less than 131 meters. Use of Genetic Algorithms to calibrate those models.

SEP 2015 | Software Engineer R&D at Instituto Telecomunicações, Lisbon

JAN 2015 Software development using C++ (OpenCV) for a video processing company: detection of black frames, black margins, flashes, block effect, removal of subtitles and inpaint on video sequences. Algorithm for the detection of flashes

was published and presented in QoMEX 2015 conference.

## EDUCATION

Dec 2014 | MSc in Electrical and Computer Engineering

SEP 2007 | Instituto Superior Técnico, Lisbon

Main Subjects: Algorithms and Data Structures, Computer Networks and the Internet, Information Systems and Databases, Mobile Communication Systems, Networks and Computer Security, Object Oriented Programming, Optical Fiber Telecommunication Systems, Radio Wave Propagation.

# Publications

Jul 2015 Roque, B., "Improving Energy Efficiency in Cellular Networks Using Multicell Cooperation", In: 10th Conference on Telecommunications, ConfTele 2015.

MAY 2015 Carreira, L. and Rodrigues, N. and Roque, B. and Queluz, M.P., "Automatic Detection of Flashing Video Content", In: Quality of Multimedia Experience (QoMEX), 2015 Seventh International Workshop on, pp. 1-6.

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#### LANGUAGES

Portuguese: Native

ENGLISH: Proficient User GERMAN: Basic Knowledge

#### Computer Skills

Basic Knowledge: HTML/CSS, JavaScript, Python

Advanced Knowledge: C#, C++, Java, SQL, Matlab, LaTeX

Software Development: Test Driven Development, Code Review, Agile

Software: Visual Studio, Git, Microsoft SQL Server, IntelliJ IDEA,

Team Foundation Server, Microsoft Office

### Professional Development

- Genetic Algorithms, Machine Learning, Blockchain, Chess Engine, and other side projects on GitHub.
  - German A1 Level, by Goethe Institute, earned in September, 2017.
  - Machine Learning, by Stanford University on Coursera, earned in April, 2017.

#### ACHIEVEMENTS

- Federated Chess Player.
- Open Water Diver, Professional Association of Diving Instructors (PADI), November 2016.
  - Driving License, B/B1, January 2010.

#### Interests and Activities

Chess, Literature, Cinema, Travel, Music (Guitar), World History, Philosophy, Board Games, Running, Swimming, Football.