

# DARIO CULIG-TOKIC

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## Computer Skills:

Python (Numpy, Pandas, SciPy  
Matplotlib, Seaborn, OpenCV)

Machine Learning (Keras, SciKit  
Learn, TensorFlow, PyTorch)

R (plyr, ggplot2, mlr, nnet, gbm)

Oracle SQL Developer

MathWorks Matlab & Simulink  
Wolfram Mathematica

MS Excel, MS PowerPoint  
MS Project, MS Visio

## Skills:

Complex data analysis  
Data visualisation  
Coding in Python and R  
Machine learning  
Mathematical modelling  
Database administration

## Courses:

Artificial Intelligence, Georgia Tech  
Reinforcement Learning, Georgia Tech  
Unsupervised Learning, Georgia Tech  
Supervised Learning, Georgia Tech  
Cost monitoring and reporting, Audi AG  
Intro to Machine Learning, Udacity  
Model Building and Verification, Udacity  
Warranty Manager Workshop, Audi AG  
Exploratory Data Analysis, Udacity  
R Programming, Udacity  
The Data Scientist's Toolbox, Udacity

## Publications:

Comparative Analysis of the District  
Heating Systems of Two Towns in  
Croatia and Denmark, Volume 92, Part  
3, 1 December 2015, Pages 435–443,  
Energy, Elsevier (cited 17 times so far)

## Languages:

English - Native or bilingual proficiency  
Croatian - Native or bilingual proficiency  
German - Limited working proficiency

## Summary

Analyst at Porsche Croatia, holding Machine Learning and Mechanical Engineering Degrees with sound understanding of machine learning principles, experience in project management, mathematical modelling and programming, with excellent problem-solving skills and international experience in Canada and Croatia. Developed end to end solution for time series problem of electricity market load prediction using deep neural networks. Created pipelines for regression problems using advanced tree gradient boosting and decomposition algorithms. Developed convolutional neural networks from scratch for classification of different dog breeds. Extracted and combined data from complex relation databases using SQL. Generated reports and visualizations using Python. Communicated data insights to relevant stakeholders and advised on data driven decision making.

## Work Experience

### Mechanical Engineer / Analyst:

Porsche Croatia, Velika Gorica, Croatia

May 2015 – Present

- Managed after-sale related projects and continuous operations in domain of extended warranty, mobility warranty, parts control and logistics.
- Developed complex regression models to predict future cost of more than 9000 different damages for used cars and cars under extended warranty
- Developed monthly business performance reports, highlighting emerging trends and performance against key performance indicators.
- Worked closely with the director and department management to identify opportunities and collaborate with stakeholders to find the right solutions.
- Advanced analytical and statistical tools for tracking types of damages, their frequency as well as financial aspects of the national market.
- Performed statistical analysis of warranty claims to detect failure trends for the whole market and individual workshops and took appropriate actions to correct nonconformities and problems.
- Applied analytical and problem solving skills in data gathering and analysis to enable better data driven decision making.
- Established automated control of 100,000 user created warranty claims for field campaigns in the amount of 5,000,000 EUR by coding logical criteria within SAGA/2.

### Mechanical Designer:

MechWave Engineering, Calgary, Canada

May 2014 – Dec. 2014

- Managed construction administration as prime consultant for data centre projects.
- Prepared proposals, mechanical site instructions, change orders and responses to RFIs and shop drawings as per company standards.
- Designed HVAC, plumbing and fire protection systems for various projects including high rise office buildings and data centres in accordance with relevant standards.

## Education

### Machine Learning Engineer

Udacity Nanodegree Program

Feb. 2018 – Aug 2018

- Supervised Learning, Unsupervised Learning, Reinforcement Learning
- Conventional ML (Bayesian models, ElasticNet, SVM, KNN, Clustering)
- Deep ML (Artificial NN, CNN, Transfer Learning), Q-learning, DPPG

### Master of Mechanical Engineering Cum Laude

University of Zagreb, Croatia

Sept. 2008 – Nov. 2013

- Mathematical Modelling, Systems Design, Energy Management
- Statistics, System Dynamics, System Control, Economics