Lucas **Rodés-Guirao**

http://lcsrg.me | hi@lcsrg.me

EXPERIENCE

EDREAMS ODIGEO
Data Scientist
June 2018 - present | Barcelona, Spain
Applying Machine Learning throughout the organisation.

NATIONAL INSTITUTE OF INFORMATICS
Research Intern
November 2017 - May 2018 | Tokyo, Japan
Deep Learning for Digital Typhoon Project under supervision of Prof. Kitamoto (Master Thesis).

TRACY
Software Developer
April 2017- March 2018 | Stockholm, Sweden
AI/Machine learning based algorithm for pet-health IT device.

KTH ROYAL INSTITUTE OF TECHNOLOGY
Teaching Assistant
January 2017 - October 2017 | Stockholm, Sweden
Assisting Prof. Atsuto Maki in Machine Learning Course.

KARLSRUHE INSTITUTE OF TECHNOLOGY
Research Assistant
March 2015 - July 2015 | Karlsruhe, Germany
Cognitive Radio under supervision of Univ.-Prof. Dr. rer.nat. Friedrich K. Jondral and Ankit Kaushik (Baschelor Thesis).

EDUCATION

KTH ROYAL INSTITUTE OF TECHNOLOGY
M.Sc in Electrical Engineering
Sept 2015 - June 2018 | Stockholm, Sweden
Cum GPA: 3.64/4

POLYTECHNIC UNIVERSITY OF CATALONIA
M.Eng in Telecommunications
Sept 2015 - June 2018 | Barcelona, Spain
Cum GPA: 3.53/4
B.Eng in Telecommunications
Sept 2011 - Sept 2015 | Barcelona, Spain
Cum GPA: 3.3/4

DEUTSCHE SCHULE BARCELONA
Sept 2003 - June 2011 | Barcelona, Spain
Abitur: 2.5 (High School)

PUBLICATIONS

[1] F. Baldassarre, D. González Morín, and L. Rodés-Guirao, Deep Koalarization: Image Colorization using CNNs and Inception-ResNet-v2, ArXiv:1712.03400, (2017).

[2] L. Rodés, A. Kaushik, S. K. Sharma, S. Chatzinotas, and F. Jondral, Square-Law Selector and Square-Law Combiner for Cognitive Radio Systems: An Experimental Study, in IEEE 84th Vehicular Technology Conference: VTC2016-Fall, 2016.

LINKS

Github @lucasrodes (check for projects)
LinkedIn @lucasrodes
Twitter @lucasrodesg

COURSEWORK

COMPUTER SCIENCE
Machine Learning, Artificial Neural Networks, Deep Learning, Artificial Intelligence, Algorithms, Information Retrieval, Unix Systems and Scripting.

ELECTRICAL ENGINEERING
Signals and Systems, Digital Signal Processing, Wireless Systems, Information Theory, Probability and Stochastic Processes.

ONLINE COURSES
Digital Signal Processing (Coursera), Convolutional Neural Networks for Visual Recognition (Stanford).

SKILLS

Teamwork, project management, programing good practices, assertive when required.

NATURAL LANGUAGES
Native: Spanish, Catalan
Fluent: English, German
Elementary: Swedish

PROGRAMMING LANGUAGES
Advanced: Python
Confident: Bash, SQL, JavaScript/TypeScript, Matlab, LaTeX
Familiar: CSS, HTML, R, Java, C

TOOLS & UTILITIES
Git/Mercurial, ssh, Docker, CI/CD, unit testing, GNU/linux, MacOS, Google Cloud Platform (BigQuery, Storage, AI Platform), numpy/scipy/pandas/sklearn/tensorflow/keras/xgboost, GPU, react native, JetBrains, VS Code, Xcode, Jira, Adobe Photoshop, Microsoft Office, Logic Pro, Blogging.

EXTRA

Member	Telecos.cat Regional Society
Guide	Smart City Expo World Congress 2015
Organiser	Youth Association enkbronats (Cabrera de Mar, Sept 2013 - Sept 2019)
Volunteering	SJ Vietnam (Hanoi, August 2014)
DJ/Producer	Freelance, Al-Faru and Be Water
Teacher	Maths/Physics for high school students

In my freetime I enjoy cooking and playing the ukulele.

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PROJECTS

ODISI LAEN Technologies
Jan 2020 - Present | Barcelona, Spain
website
Development of mobile App using React Native and TypeScript for iOS and Android.

WHATSTK Open Source
Dec 2016 - Present | Barcelona, Spain
website | github | pypi
Development, testing, versioning, maintainance of an open source python library to read and analyse WhatsApp chat. Distributed under the GPL-3.0 license.

HOTEL BOOKING PREDICTIVE MODEL eDreams ODIGEO
Feb 2019 - Jan 2020 | Barcelona, Spain
Implementation of Machine Learning model to predict the user propensity to book a hotel.

VIRTUAL INTERLINING eDreams ODIGEO
Sep 2018 - Jan 2019, Oct 2019 - Present | Barcelona, Spain
virtual interlining info
Company initiative to generate new content joining flights/segments from different sources (e.g. different carriers, providers etc.). In this project, I am in charge of the implementation and research of Machine Learning applied to Virtual Interlining. This includes exploratory data analysis, hyper-parameter tuning, productionalisation, testing, versioning and maintainance of the model, analysis on the results from A/B tests etc. Working with Data Engineer, Backend Engineers and Business.

DEEP LEARNING FOR DIGITAL TYPHOON
Academic (NII, KTH, UPC)
Nov 2017 - May 2018 | Tokyo, Japan
report | github | documentation
Done as part of my Master Thesis. Design and implementation of (i) a classifier to differentiate natural tropical cyclones and extratropical cyclones and (ii) a regression model to estimate the centre pressure value of a typhoon. In addition, we also explore cleaning methodologies to ensure that the data used is reliable.

DEEP KOALARIZATION Academic (KTH Royal Insitute of Technology)
Jun 2017 - Dec 2017 | Stockholm, Sweden
website | github | paper
Acknowledged by Keras creator François Chollet, we review of recent approaches to colorize gray-scale images using deep learning methods. Proposition of a model that combines a deep Convolutional Neural Network trained from scratch with high-level features extracted from Inception-ResNet-v2 pre-trained model. Assessment of the "public acceptance" of the generated images by means of a user study. Finally, we present a carousel of applications on different types of images, such as historical photographs.

SENSOR MOTION DATA EXPLORATION Tracy Trackers
Apr 2017 - Mar 2018 | Stockholm, Sweden
website
Development and implementation of an AI/Machine learning based algorithm for pet-health IT device in an early-stage Start-up. Data collection, data cleaning, Cloud architecture discussions, Start-up roadmap etc.

TRUMP TWITTER ANALYSIS/VISUALISATION
Academic (KTH Royal Insitute of Technology)
Apr 2017 - Jun 2017 | Stockholm, Sweden
github | report
Visualization of Trump Tweets using Kibana and ElasticSearch. This project was developed as part of the DD2476 Search Engines and Information Retrieval Systems course at KTH Royal Institute of Technology, spring 2017.

KERNEL PCA FOR DENOISING Academic (KTH Royal Insitute of Technology)
Nov 2016 - Jan 2017 | Stockholm, Germany
report | github | original paper
We reproduced the experiments presented in the paper Kernel PCA and De-noising in Feature Spaces by Sebastian Mika, Bernhard Schölkopf, Alex Smola Klaus-Robert Müller, Matthias Scholz and Gunnar Rätsch as a project in DD2434 Machine Learning Advance Course during Winter 2016.

BOOK AUTHOR CLASSIFICATION Academic (Polytechnic University of Catalonia)
May 2016 - Jun 2016 | Barcelona, Spain
report | github
Book-Author-classification is a project based on python and bash to classift book fragments. We have used spanish literature books. We have used different classifiers and different trainig/test data distribution strategies.

DEPLOYMENT OF ENERGY DETECTOR FOR COGNITIVE RELAY WITH MULTIPLE ANTENNAS Academic (Karlsruhe Institute of Technology)
Mar 2015 - Jul 2015 | Karlsruhe, Germany
report
Bachelor thesis in Telecommunications Engineering as an exchange student at KIT.
Deployment of a signal detector based on Energy Detection in order to take advantage of spectrum holes in a Cognitive Relay scenario. Furthermore, the case with multiple antennas in reception (i.e. where the detection process occurs) are studied.