

David Paule, PhD

COMPUTING SCIENTIST AND SOFTWARE ENGINEER

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Experience

ACADEMIA

PhD Researcher

SCHOOL OF COMPUTING SCIENCE, INFORMATION RETRIEVAL GROUP - UNIVERSITY OF GLASGOW

Glasgow, Scotland

Apr. 2014 - Feb. 2019

- Identify research problems and address them with critical thinking and scientific rigour.
- Develop and test novel algorithms and statistical models.
- Design of research experiments.
- Software development: collect relevant data and implement experiments.
- Statistical analysis of experimental data.
- Adequately interpret and communicate research findings.

Research Assistant

URBAN BIG DATA CENTRE (UBDC) - UNIVERSITY OF GLASGOW

Glasgow, Scotland

Apr. 2014 - Feb. 2019

- Developing scripts for downloading data from different online sources with different formats and restrictions.
- Preprocessing and cleaning of Big Datasets (Cloudera Manager, Hadoop, Spark).
- Producing experimental results and analysis for researchers in other areas.

Undergraduate Tutoring

UNIVERSITY OF GLASGOW

Glasgow, Scotland

Sep. 2015 - Jun. 2017

- Help and guide many groups of students through their studies.
- Programming (Python).
- Computer systems & databases.
- Human-computer interaction
- Algorithm foundations.

INDUSTRY

Junior Backend Engineer

TWIG WORLD - TWIG-WORLD.COM

Glasgow, Scotland

Jan. 2014 - Apr. 2014

- Successfully developed, maintained and tested complex database-driven web application.
- Adopted and proposed new software development methodologies and experimented with new tools and technologies.
- Python/Django.
- Test Driven Development (TDD).
- Continuous Integration (CI).
- CVS (GIT).
- MySQL and Object-Relational Mapping (ORM).

Software Engineer & Data Analyst

CANARIAS.COM

Tenerife, Spain

May. 2013 - Aug. 2013

- Developed an email marketing web application integrated into the company's software ecosystem.
- PHP/Javascript (Frontend and Backend).
- Microsoft SQL Server.
- Data mining for the Marketing Department (Weka).

Software Engineer

FREELANCE

Tenerife, Spain

Sep. 2012 - Sep. 2013

- Analysis, design and implementation of a press-oriented CMS that provide local and small clients with a tool that helps them to automate and simplify the management of an online newspaper.
- Full Stack (Frontend and Backend).
- Python/Django.
- Test Driven Development (TDD).
- Continuous Integration (CI).
- CVS (GIT).
- MySQL and Object-Relational Mapping (ORM).

Education

PhD in Computing Science (Information Retrieval and Machine Learning)

UNIVERSITY OF GLASGOW

Glasgow, Scotland

Apr. 2014 - Nov. 2018

PhD thesis title: “*Inferring the Geolocation of Tweets at a Fine-Grained Level*” (<http://theses.gla.ac.uk/41007/>).

Bachelor’s Degree in Computer Engineering

UNIVERSITY OF LA LAGUNA

Tenerife, Spain

2007 - 2013

I obtained my Bachelor degree at the University of La Laguna, which has a focus on Information Systems and Software Engineering.

Research

PHD THESIS - INFERRING THE GEOLOCATION OF TWEETS AT A FINE-GRAINED LEVEL

In my PhD Thesis, I aimed to tackle the problem of inferring the geolocation of individual non-geotagged social media posts at a fine-grained level (i.e. building or neighbour level) using pieces of evidence from the post (text and metadata). To this end, I have proposed novel models and methods that can geolocalise a post with an average error of 1 km distance. Besides, I demonstrated the generalisation and effectiveness of such models in a real-world practical application related to the detection of traffic incidents from social media data. Due to the lack of geotagged posts in Social Media streams, this work provides scientists with an enhanced sample of quality geolocated social media posts for their analysis and applications.

RESEARCH PUBLICATIONS

During my PhD, I had the opportunity of conducting interdisciplinary research and published multiple research papers that have contributed to the fields of Computing Sciences, as well as Social Sciences and Geographic Information Sciences.

Learning to Geolocalise Tweets at a Fine-Grained Level

2018

JORGE DAVID GONZALEZ PAULE, YASHAR MOSHFEGHI, CRAIG MACDONALD AND IADH OUNIS.

In Proc. of the 27th International Conference on Information and Knowledge Management (CIKM'18)

On Fine-Grained Geolocalisation of Tweets and Real-Time Traffic Incident Detection

2018

JORGE DAVID GONZALEZ PAULE, YERAN SUN AND YASHAR MOSHFEGHI.

In Information Processing & Management, Elsevier.

Beyond Geo-Tagged Tweets: Exploring the Geo-Localisation of Tweets for Transportation Applications

2018

JORGE DAVID GONZALEZ PAULE, YERAN SUN AND PIYUSHIMITA THAKURIAH.

In Transportation Analytics in the Era of Big Data, Springer.

On Fine-Grained Geolocalisation of Tweets

2017

JORGE DAVID GONZALEZ PAULE, YASHAR MOSHFEGHI, JOEMON JOSE AND PIYUSHIMITA THAKURIAH.

In Proc. of the 3rd International Conference on the Theory of Information Retrieval (ICTIR'17). Amsterdam, Netherlands.

Spatial analysis of users-generated ratings of yelp venues

2017

YERAN SUN AND JORGE DAVID GONZALEZ PAULE.

In Open Geospatial Data, Software and Standards

Sensing spatiotemporal patterns in urban areas: analytics and visualizations using the integrated multimedia city data platform

2016

PIYUSHIMITA THAKURIAH, KATARZYNA SILA-NOWICKA AND JORGE DAVID GONZALEZ PAULE

In Built Environment 42(3), pages 415-429.

Skills

DATA SCIENCE

Theoretical Background	Information Retrieval; Machine Learning; Natural Language Processing; Data (Text) Mining;
Machine Learning	Gensim; Scikit-learn; TensorFlow; Weka
Data Analysis	Pandas; Numpy; SciPy; Jupyter Notebook
NLP and IR	NLTK (Python); SpaCy (Python); Lucene (Java); Terrier (Java)
Big Data	Cloudera Manager; MapReduce (Hadoop); Spark; Pig

SOFTWARE ENGINEERING

Programming Languages	Python; Java; C/C++; Bash
Software Development	TDD; Continuous Deployment/Integration; Agile; SCRUM; Pair Programming
Dev Tools	Git; VirtualBox; Vagrant; Docker; Jenkins
Operating Systems	Linux (CentOS,Ubuntu); Windows; Mac OS X
Web Technologies	HTML; CSS; JavaScript; Python/Django
DBMS	MySQL; PostgreSQL; Microsoft SQL Server

OTHERS

Languages	Spanish (Native); English (Professional working proficiency)
Documents	Spanish Passport; Eligible to work in the EU
References	Under request