







LUDOVICO PINZARI




Spatial Data Scientist & CS Engineer

Research Spatial Data Scientist and CS Engineer with 4+ Ph.D experience working in the Healthcare Industry for Government agencies.

Experienced with developing and prototyping innovative unsupervised Machine Learning tools for clustering spatial data. I'm passionate about designing creative and innovative solutions, by translating business requirements into concise, readable and robust code.

I desire to be part of a creative team to develop professional skill in high scalable full stack software construction and deployment of platform services leveraging Machine Learning models.

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 Website <https://www.ludovicopinziari.net/>
 <https://github.com/lpinzari>

SKILLS

TECHNOLOGIES/LANGUAGES	ANALYSIS/DESIGN	SOFT SKILLS
<ul style="list-style-type: none"> • Proficient: R, SQL • Familiar : JavaScript, HTML, CSS, Python • Previously used: ArcGis, C, MATLAB 7 • Experienced with: Git, GitHub, Unix Shell 	<ul style="list-style-type: none"> • Algorithms prototyping • Statistical modelling • Data Mining, clustering • Operations Research 	<ul style="list-style-type: none"> • Creativity, Curiosity, Ingenuity • Listening, questioning, idea exchange • Public speaking, technical writing • Integrity, self-motivated, initiative

EXPERIENCE



CAPITAL MARKETS CRC LIMITED **Sydney, NSW, Australia**

Ph.D Research Data Scientist **May 2015 - July 2019**

CMCRC Ph.D Program: Awarded \$ 150,000 tax-free scholarship to conduct industry-based research projects through the University of Western Sydney and the industry partners:

- AIHW (Australian Institute of Health and Welfare)
- NHPA (National Health Performance Authority)

link: [MAPPING THE GEOGRAPHY OF HEALTH - HOW INDUSTRIAL PHD STUDENT LUDOVICO DEVELOPED BREAKTHROUGH INTERACTIVE TOOL](#)



AUSTRALIAN INSTITUTE OF HEALTH AND WELFARE **Sydney/Canberra, Australia**

Research Data Scientist **July 2016 - March 2019**

Project: [Customizable peer-grouping of geographic areas](#)

- Developed a working prototype of an application that allows users to classify, compare and cluster customizable geographic areas. This tool can be used by government agencies to produce fair comparisons of the performance of primary health organisation, such as Primary Health Networks. **Document link:** [SA3 BROWSER: A Tool for classification and comparison of geographic areas](#)
- Invented, designed and implemented a statistical framework for the identification, classification and comparison of peer-groups geographies. **Publication link:** [A framework for the identification and classification of homogeneous socioeconomic areas in the analysis of health care variation.](#)
- Created the first set of peer-group geographies suitable for reporting health care indicators across Australia. Wennberg International Collaborative Conference: **Conference Presentation link:** [DEVELOPMENT OF TOOLS FOR THE ANALYSIS OF GEOGRAPHIC VARIATION AND CLASSIFICATION OF PEER-GROUPS.](#)
- Invented, designed and implemented two statistical indices for the classification of ordinal categorical distribution. **R Open source GitHub link:** [The HOMOGENEITY & LOCATION INDEX: A Statistical framework for the Classification of ordinal categorical data.](#)



Project: [Tools for the design of customizable geographies and catchment areas](#)

- Designed and implemented a visualisation tool which enables healthcare planners to easily analyse local supply and demand of health workforce.

R/ArcGIS Open source GitHub link: [MAPPING NETWORKS FLOW IN R AND ARCGIS](#)

- Produced networks flow maps in R and ArcGIS for the publication:

Publication link: [A new generation of Primary Care Service Areas or general practice catchment areas.](#)

EDUCATION



WESTERN SYDNEY UNIVERSITY

Campbelltown, NSW, Australia

Ph.D Health Data Science

Feb 2016 - Dec 2020

Translational Health Research Institute

Activities: Public Health - Health GIS - Spatial Data Analytic - Clustering - Public Reporting

Thesis: [Development of Tools for the Classification of Peer-groups geographies in the analysis of health care variation.](#)



ROMA TRE UNIVERSITY

Roma, Italy

Master Degree, Automation and Management Engineering

2008 - March 2014

Department of Computer Engineering

Final degree mark: 110/110 cum laude

Key coursework: Autonomous/Industrial Robotic and Data Fusion - Systems Theory - Signal Processing - Digital Control - Automatic Control - Fuzzy Control - Operations Research

Dissertation/Thesis: [The conflict management in the Theory of Dempster and Shafer](#)



ROMA TRE UNIVERSITY

Roma, Italy

Bachelor Degree, Computer Science

2002 - July 2007

Department of Computer Engineering

Final degree mark: 102/110

Key coursework: OOP - Data Base - Computer Networks - Combinatoric optimisation - Numerical Analysis - Algorithms and Data Structures - Linear Algebra - Calculus

COURSES



SOFTWARE IMMERSIVE ENGINEERING

Sydney, NSW, Australia

Software immersive engineering student

July 2019 - Sept 2019

Full time Software engineering course.

Learning the technologies required for full stack development.

Key coursework: Javascript - HTML - CSS - React -Bootstrap - Ruby - Rails - Ajax - Git - GitHub, Unix, Postgresql, Agile, TDD

HONOURS & AWARDS



- 1st Prize - "Best Presentation" awards, outlining the current research undertaken by the CRC PhD students
- 2nd Prize - "Pitch Fest" : a competition where the CRC PhD students pitched an idea for an innovative application that had potential to be developed for industry. **Link:** [CMCRC HEALTH FEST](#)
- Most industry engaged CRC PhD student of the year 2015

ACTIVITIES & SOCIETIES

- Publishing and Posting articles about Data Science, Technology and Human Geography: • [Data Science Central](#) • [LinkedIn](#)
- The Wennberg International Collaborative: • [Wennberg Website](#) • [Wennberg Publication Australia 2018](#)
- I enjoy developing game applications and basic data science projects: • [memory-game](#) • [Bugs-Island](#) • [Bike-share](#)
- I also possess a nice collection of Boomerangs: [Boomerang Collection Gallery and Technical Documents](#)