

# Pier Paolo Ippolito

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## PROFESSIONAL SUMMARY

Data Scientist at SAS and MSc in Artificial Intelligence graduate with an interest in research areas such as Data Science, Machine Learning and Cloud Development. As a result of my work experience, I had the opportunity to work with large scale software projects collaborating effectively within different teams. Aside from my work activities, I am a freelancer and technical writer for Towards Data Science (an online publication with two million annual readers).

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## AREAS OF EXPERTISE

**Programming Languages:** Python/R/SQL/SAS.

**Frameworks:** TensorFlow/Keras/PyTorch/Apache Spark/Scikit-learn/Plotly/SAS Viya.

**Technologies:** Microsoft Azure/Google Cloud/AWS/Docker/Kubernetes/Robotic Process Automation/Git.

**Soft Skills:** Team Building/Project Lifecycle Management (Scrum)/Fluent in English and Italian.

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## EMPLOYMENT HISTORY

**SAS Institute, London, UK**

*Data Scientist*

*Aug. 2020 – Present.*

- As part of my role at SAS, I am currently working with the Data Science team in order to help our customers solving various data-driven challenges using Cloud-based technologies and MLOps processes.
- SAS is a leader in data analytics with more than 40 years of experience and representing about 92% of the US Fortune 100 companies.

**Towards Data Science, London, UK**

*Technical Writer/Editor*

*Apr. 2019 – Present.*

- I am currently both an Editor and Writer for [Towards Data Science \(link\)](#). As a writer, I frequently publish articles about Artificial Intelligence and Software Development (more than half a million views worldwide).
- As part of my Editor experience, the editorial team and I work in order to make sure, through content curation, that the best possible articles can be published on our platform.

**Digital-Dandelion, London, UK**

*Research Data Scientist*

*Sept. 2019 – Sept. 2020*

- As a Research Data Scientist, I collaborated with a variety of business clients in sectors such as finance, retail and e-commerce. In each business project, I worked with clients to plan and deliver specialised solutions to solve their commercial data problems.
- One of the most interesting projects I worked on was analysing how changes in Stock Prices can affect different company shares parameters (Level 2 Data) and how these can be predicted. To do so, different techniques such as Feature Selection/Engineering and Ensemble Learning have been employed.
- This role has developed my ability to work to a deadline to produce an excellent product, utilising technologies such as Google Cloud APIs, A/B testing and version control tools (e.g. Git).

**ION Group, Woking, UK**

*Summer-Intern, Service Delivery Developer*

*Jul. 2019 – Sept. 2019*

- Improved ION's Fidessa online framework working in the Financial Derivatives Automation Team. This role involved working on the client-side using Javascript, and on the server-side using SQL.
- Throughout this experience, I attended daily Scrum meetings with the rest of the team in order to ensure the best division of workloads and punctual delivery.

**Documation Software Ltd, Southampton, UK**

*Spring-Intern, Software Developer*

*Apr. 2019 – Apr. 2019*

- Created and implemented two programs using UiPath as a [Robotic Process Automation \(link\)](#) tool to automate supplier's registration and creation of invoices into financial systems (Sage 50).
  - The two developed programs have then been successfully deployed to production and used by Documation and its customers. Their application has been proved to speed up processes up to three times.
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## PUBLICATIONS & RESEARCH PROJECTS

### Causal Reasoning in Machine Learning

- Nowadays Machine Learning technologies rely just on correlations between the different features. Although, this approach can possibly lead to wrong conclusions since correlation does not necessarily imply causation.
- As part of [this research study \(link\)](#), I created and deployed on Amazon Web Services (AWS) a suite of Agent Based and Compartmental Models in order to simulate epidemic diseases developments in different types of communities.

### Alleviate Children's Health Issues through Games and Machine Learning

- Developed a suite of games designed to help children affected by disabilities. The games were synchronised with a wireless EEG wearable device used to register the children brain activities. By analysing the brainwaves data using a Long Short Term Memory (LSTM) model, it was possible to correctly classify with 96.9% accuracy if a child is affected or not by autism.

- An online publication about this research project is available at [this link](#). To successfully manage this project, different project management tools such as Gantt charts and Risk Assessment Matrices have been used.

## Open Source Contributions

- Worked on various open source projects using programming languages such as Python and R (more than 250 followers on GitHub). Some of my most interesting projects regarding topics such as Computational Finance and Reinforcement Learning are currently available in my [Artificial Intelligence Projects GitHub repository \(link\)](#).

## Evolutionary Algorithms

- Successfully reproduced and expanded Dr Simon Power's research publication "Individual Selection for Cooperative Group Formation" in order to examine the effects of group selection. Group selection, is an evolutionary mechanism in which natural selection takes place in groups instead than at individual level.

## Image Feature Extraction and Classification

- Implemented Feature Extraction techniques such as HOG (Histogram of oriented gradients), SIFT (Scale-invariant feature transform), SURF (Speeded up robust features) in Python in order to perform classification on a 15 classes dataset of 1500 images using bag of visual words (BoVW) and one versus all classifiers.

## EDUCATION

### University of Southampton, Southampton, UK

MSc Artificial Intelligence

Sept. 2019 – Sept. 2020

Distinction (86%).

**Key Modules:** Evolution of Complexity (95%), Deep Learning (92%), Reinforcement & Online Learning (85%).

### University of Southampton, Southampton, UK

BEng (Honours) Electronic Engineering

Sept. 2016 – June. 2019

First Class Honours Degree (78.68%), top 2% Electronics and Computer Science Department.

**Key Modules:** Computational Biology (95%), Machine Learning (83%), Robotic Systems (88%), Dissertation (89%).

### Liceo Scientifico Enrico Fermi, Aversa, Italy

Esame di Stato (A-Level Equivalent), 99/100 (A\*AA Equivalent).

Sept. 2011 – July. 2016

## AWARDS & SCHOLARSHIPS

- Awarded various technical cloud certifications on platforms such as [Credly \(link\)](#), [Microsoft Learn \(link\)](#) and [Google Cloud Training \(link\)](#).
- Hursley Prize for Outstanding Computer Science Project 2018/19 (Dissertation: 89%).
- Electronics and Computer Science 2016 Excellence Scholarship - monetary award for exceeding university requirements.

## ACTIVITIES

### Events

[Companies Data Science Challenges Repository](#)

- TEDxLondon Volunteer 2021, Facebook Analytics Academy 2018, J.P. Morgan: Introduction to Big Data Analytics using Spark and Python 2018 (Spark data-set challenge winner).

### Hackathons

[Hack The South Repository](#)

- Google BGN 2019 London Hackathon, Facebook London Hack 2019: First Challenge Winner, Hack The South 2019: Best Hardware Prize Winner.

### Microsoft Student Ambassador

[Microsoft Azure Repository](#)

- As part of my Master Degree, I have been a Microsoft ambassador at the University of Southampton. Thanks to this role, I had the opportunity to organise and present Workshops and Hackathons events using Microsoft Azure technologies.

### Societies

[Artificial Intelligence Society](#)

- I have been a founding committee member of the University of Southampton Artificial Intelligence Society for which I organised workshops covering topics such as Machine Learning deployment and Natural Language Processing.

### Data Structures & Algorithms

[Algorithms and Hackerrank Challenges](#)

- Experienced working with Data Structures & Algorithms and implementing them in order to solve common programming problems.

## CONFERENCES

### Open Data Science Conference 2020 (Europe)

- Took part at the 2020 Open Data Science Conference as a team member of the SAS UK booth, in order to showcase the latest advancements of the SAS Viya data analytics platform.

### Mobile World Congress 2019

- Attended the 2019 Mobile World Congress in Los Angeles (US) as a press member for NVIDIA to find out how 5G technologies can be used to enhance AI powered applications.