Pier Paolo Ippolito

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PROFESSIONAL SUMMARY

SAS Data Scientist 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).

AREAS OF EXPERTISE

Programming Languages: Python/R/Julia/SQL/C++.
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.

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 (about 150,000 views in the last six months).
- 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 on analysing how changes in Stock Prices can affect different company shares parameters (Level 2 Data) and how can these 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 A/B testing and version control tools such as Git version control.

Fidessa, *Woking, UK*
Summer-Intern, Service Delivery Developer *Jul. 2019 – Sept. 2019*

- Improved Fidessa online frameworks working in the Financial Derivatives Automation Team. This role involved working on the client-side using HTML/CSS/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 product 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 programs I developed are currently used by Documation and its customers. Their application has been proved to speed up these processes up to three times.

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 Contribution

- Worked on various open source projects using programming languages such as Python and Julia (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 class 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 Acclaim (link), Microsoft Learn (link) and Google Cloud Training (link).
- Hursley Prize for Outstanding Computer Science Project 2018/19 (Dissertation: 89%).
- Electronics and Computer Prize Excellence Scholarship 2016 - monetary award for exceeding university entry requirements.

ACTIVITIES

Microsoft Student Partner
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.

Events
Companies Data Science Challenges Repository

- Facebook Analytic Academy 2018, J.P. Morgan: Introduction to Big Data Analytic using Spark and Python 2018 (Spark data-set challenge winner), Microsoft: Deep Learning Data Analysis in Azure Workshop.

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.

Societies
Artificial Intelligence Society

- I have been 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 press member to find out how upcoming 5G technologies can be used to enhance AI powered applications.