Alexandry Augustin, PhD

Telephone: (+44) 7 48 881 8335 | Email: alexandry.augustin.jobs@gmail.com | Website: alexandryaugustin.com | Github: alexandry-augustin | LinkedIn: alexandryaugustin

Impact-driven data scientist with 9+ years of proven track record of delivering valuable insights via software engineering, data analytics, advanced statistical and machine learning methods. Designed and developed over 15+ advanced applications from use cases and functional requirements.

Professional Experience

Research Fellow, Biostatistics   **Southampton, UK (remote)**
7/2019-6/2022 | University of Southampton | fixed-term
- Suggested improved treatment strategies for blood pressure management by analysing the outcome of hypertensive patient (~1 million+) using Monte Carlo simulations.
- Results show that (i) a large proportion of patients are over- or under-treated, (ii) long-term blood pressure control can be improved by mitigating therapeutic inertia irrespective of measurement technique.
- Proposed a set of recommendations for inclusion in the national hypertension guidelines (NICE).
- Supported clinicians' decision making by incorporating the research outcome into a mobile app (via Cranworth Medical Ltd).
- Contributed to 4 proposal winning grants securing ~£350,000 in fundings.
- Results published in journal papers.

Data Analyst   **Southampton, UK (hybrid)**
9/2021-3/2022 | University Hospital Southampton NHS FT | contract
- Developed a LIMS simulation framework as part of a nation-wide effort to deliver high volume asymptomatic testing for COVID-19 via Direct RT-LAMP assays on saliva samples.
- Contributed to increase processing capacity up to 72,000 samples per day.
- Contributed to improve daily test results throughput to 99%.

Research Scientist, Machine Learning   **Cambridge, UK (hybrid)**
4/2018-3/2019 | Toshiba Research Europe | contract
- Developed a data driven dialogue topic tracker via deep learning.
- Results show up to 30% improvement in accuracy on human-to-human dialogues.
- Extended the reach of the improvements by deploying the model on Toshiba's group-wide prototype plateform.
- Results published in an international workshop (NeurIPS).

Software Developer   **London, UK (office-based)**
3/2014-11/2014 | Aquis Exchange Limited | permanent
- Continuously improved the market surveillance system and core system library.
- Enabled the efficient processing of high volume of surveillance alerts and the filtering of historical trading orders.

Lead Software Developer   **London, UK (office-based)**
2/2012-9/2013 | GIMO | permanent
- Led the design and development of distributed, multithreaded on-line game server and reusable framework.
- Complete ownership of the technical development from inception to completion.
- Won a number of company-wide coding challenges.

Data Analyst   **London, UK (office-based)**
7/2010-10/2010 | Deutsch Bank | contract
- Provided senior management with daily analysis of changes to financial risk exposure (VaR, sensitivities, volatilities and correlations) at group, business line and product specific levels (IR and FX books).

Data Analyst   **New York, NY / London, UK (office-based)**
9/2008-2/2010 | Société Générale | contract

- Continuously monitored of commodities derivatives, arbitrage activities, regulatory margin, risk metrics, financing, and global exposures to banks and clients.
- Successfully met monthly regulatory compliance for capital requirement (Basel II).

Project Coordinator   **New York, NY (office-based)**

1/2008-1/2009 | Société Générale | contract
- Provided senior management and project committees data necessary to make decisions by consolidating the company's global portfolio of ~300 outstanding projects.
- Ensured proper project governance by closely monitoring the company's U.S. portfolio of ~100 projects (milestones, major issues, status, progress against budget).

Software Developer   **London, UK (office-based)**

10/2006-10/2007 | Cezanne HR Limited | permanent
- Generated significant cost-savings opportunities to customers by successfully migrating the company's charting software (HRCharter) from a software-as-a-product to a software-as-a-service.

Education

University of Southampton - Department of Electronics and Computer Science   **2020**
PhD in Computer Science
- Highlighted a link between distributional semantics, topic identification, and human judgment indicating the potential advantages of human-in-the-loop machine learning approaches.
- Research extended in two international conference proceedings (IJCAI, NeurIPS).

Imperial College London - Department of Mathematics   **2011**
MSc in Mathematics and Finance

University of Paris-Saclay - Polytech School of Engineering   **2006**
MSc in Electronics and Computer Science

University of Paris-Saclay   **2002**
BSc in Electronics and Computer Science
- Within the cohort top 3% (2nd year) and 20% (1st year).

Lycée Edouard Branly   **2000**
Baccalauréat in Electrical Engineering (Distinction)
- Within the national top 12% that year.

Publications

Quantitative Strategies for the Personalisation of Antihypertensive Therapy, A. Augustin,F. Shankar,D. Burns,C. M. Baker-Smith,L. Coutts,Phil J. Chowienczykb,C. N. Floyd, preprint, 2022.

The Impact of Therapeutic Inertia on Long-term Blood Pressure Control: a Monte Carlo Simulation Study, A. Augustin,L. Coutts,A. S. Wierzbicki,L. Zanisi,F. Shankar,P. J. Chowienczyk,C. N. Floyd, Journal of Hypertension, 2020.

Open-domain Topic Identification of Out-of-domain Utterances using Wikipedia, A. Augustin,A. Papangelis,M. Kotti,P. Vougiouklis,J. Hare,N. Braunschweiler, Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS), Workshop on Human in the Loop Dialogue Systems (HLDS), 2020.

Learning and Evaluation of Topics via Distributional Semantics, A. Augustin, University of Southampton Institutional Repository, 2020.

Bayesian Aggregation of Categorical Distributions with Applications in Crowdsourcing, A. Augustin,M. Venanzi,A. Rogers,N.R. Jennings, Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI), 2017.

A Parametric Approach To Bayesian Drift Estimation of Discretely Observed Price Diffusion Processes, A. Augustin, Imperial College London, 2011.

Certifications

- National Commodity Futures Examination (Series 3)

Skills

Programming (proficient): Python, C++, C
Programming (prior experience): R, MATLAB, Lua, JavaScript, Java, SQL, bash
Statistics: Bayesian Inference, Gaussian Process

Machine Learning: Supervised learning, Self-supervised learning, Unsupervised learning, Deep Learning
Selected Tools: Numpy, Pandas, Matplotlib, Seaborn, Scikit-Learn, Jupyter Lab, TensorFlow, Keras, Torch, PyTorch, Infer.NET, node.js, git, gdb, gcc, valgrind, Linux, Raspberry Pi, Arduino, MongoDB, MySQL, PostgreSQL

Interests

Statistics, Machine Learning, Software Development, Data Science, Computer Vision, Computer Graphics, Visualisation.

Languages

French (Native,), English (Fluent, C2), Spanish (Intermediate, B2).