

Aurélien Roy

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🎓 Education

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|---|--|------------------|
| M.Sc.Eng | University of Technology of Compiègne (Paris-Sorbonne) | 2016-2019 |
| <ul style="list-style-type: none">• Computer Science (major): Data structures and algorithms, Object-oriented programming, Structure of a CPU, Stochastic processes, Operational research, Graphs theory, Databases conception• Data mining and B.I (minor): Machine learning, Statistics, Data mining and analysis, Indexing and information search, Data-warehouses conception and population• Other courses: Intercultural business, Project management• GPA: 4.75 / 5.00 | | |
| Bachelor Degree | Paris-Sud University | 2014-2016 |
| <ul style="list-style-type: none">• Computer Science (major): Algorithms, Databases, System and networking, Web and Android development• Result: First in class | | |

💼 Work experience

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| ML Research intern | UMRsu (Town planning Research Institute), Canada | 6 months, 2019 |
| <ul style="list-style-type: none">• Analyzed and valued 5 years of data from 911 call center in Québec City• Designed predictive models for police event quantification (crime, burglaries...)• Trained <i>LSTM</i> and <i>decision trees</i> models offering ~19% higher accuracy than seasonal models at event count prediction• Presented methodology and results in a <i>research paper</i> (pending review)• Utilized: Python, PyTorch, scikit-learn, PostgreSQL | | |
| Software engineer intern | Thales (Defense), France | 6 months, 2018 |
| <ul style="list-style-type: none">• Broadened usage in the department of a scenario editor software by improving it to handle new use cases• Harmonized the tools used by two different Agile teams by enabling information exchange between them• Saved 2-week per new software release of a military radio simulator by building an <i>automated qualification process</i>• Utilized: C++, Java, SWT, Jenkins | | |
| IT Teacher (Part-time) | CNAM (Higher education establishment), France | 4 months, 2018 |
| <ul style="list-style-type: none">• Taught Algorithm and Java in parallel with my studies | | |

📁 Software projects

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| Find Cat Breed (iOS app) | Personal project | 2019 |
| <ul style="list-style-type: none">• Taught myself Swift, built an iOS <i>computer vision</i> app using <i>machine learning</i>, and published it on the <i>App Store</i>• Trained an <i>image classifier</i> capable of distinguishing 44 cat breeds with a 51% accuracy• Utilized: Swift, CoreML, Python, PyTorch | | |
| Business app (Web app) | Freelance (Client: Arabesque - Dance School) | 2018 |
| <ul style="list-style-type: none">• Developed a <i>single-page app</i> allowing the dance school to manage its members, the registration renewals, the membership billing and the course schedule• Utilized: PHP, SQL, Javascript, Vue.js | | |
| Craftasia (Large Minecraft server) | Personal project | 2013-2016 |
| <ul style="list-style-type: none">• Developed and deployed game modes, administrated a Unix server for one of the largest french Minecraft server in its time (10K registered members and up to 150 simultaneously online players)• Utilized: Java, Maven, PHP, SQL, Unix | | |

</> Skills

- **Technologies:**
Programming: C/C++, iOS development, Java, Swift ; *Data science:* Python, PyTorch, R, scikit-learn, SQL, Tensorflow
Web: HTML, CSS, Javascript, PHP, Vue.js ; *DevOps:* AWS, Git, Maven, Unix
- **Machine learning:** Deep neural networks, SVM, splines, decision trees, discriminant analysis
- **Business intelligence:** Data-warehouse and datamarts conception and population