# Adam Jaamour

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GitHub: github.com/Adamouization

## EDUCATION

**University of St Andrews**                                      St Andrews, UK

MSc in Artificial Intelligence                                        2019–2020

- Achievement: All-time top grade of Machine Learning module since its inception, with a 99.0% average.
- Grade: 88.99% *(Distinction)*
- Modules: AI Principles *(probability/statistics, neural networks, search algorithms)*, AI Practice *(Python/Java projects)*, Machine Learning, Language and Computation *(NLP)*, Object-Oriented Modelling/Programming *(Java projects)*, Information Visualisation *(Tableau, D3.js)*, Information Security Management, Web Technologies.

**University of Bath**                                                Bath, UK

BSc Computer Science                                                  2015–2019

- Grade: 71.58% *(First-Class Honours)*
- Modules: Computer Vision, Parallel Computing *(C, MPI, threading)*, Intelligent Control and Cognitive Systems, Networking, Safety-critical Computer Systems, Data Structures and Algorithms, Pattern Matching *(classifiers, regression, probabilities)*, AI Fundamentals, Visual Computing, Functional Programming *(Haskell, $\lambda$-calculus)*, Databases *(SQL)*, Designing Interactive Systems, Discrete Mathematics for Computation *(calculus)*, Analytical Mathematics for Applications, Principles of Programming *(C and Java projects)*.

**Lycée Albert 1er**                                                  Monaco

French Baccalaureate, Scientific Stream with "Option Internationale".              2012–2015

## WORK EXPERIENCE

**Scuderia Toro Rosso Formula 1 Team**                              Bicester, UK

Software Engineer Placement                                          2017–2018

- Developed and stabilised the front-end and back-end of a large, single-page, web application in Python, Django, Django REST Framework, KnockoutJS, PostgreSQL and Docker; allowing terabytes of weekly aero simulation data to be reliably delivered to users.
- Implemented new tools for visualising and interacting with the aero data, resulting in new car parts being designed to ultimately make the car go faster.
- Improved robustness by building an extensive test coverage suite of unit tests, integration tests and acceptance tests (Python unitest and Selenium) and by documenting the code in a wiki to retain team knowledge.
- Enhanced performance by identifying slow SQL queries and optimising related Django ORM code.
- Liaised with domain experts in the UK and Italy to translate user requirements and business cases into code changes.
- Set up direct contact between Toro Rosso and the University of Bath for the recruitment of future interns and interviewed potential candidates.

**Monte-Carlo Multimedia**                                           Monaco

Android Application Developer Intern                                 Summer 2016

- Designed and implemented a scalable template-like Android application for a real-estate agency from scratch by fetching data from a single XML feed, which involved writing the server-side logic in Java and the UI in XML.
- Using my template, a second application was created on my final work day and published on the Google Play Store in under 3 hours (https://bit.ly/2qqexsH).

## Research

- Jaamour, A. (2020), Breast Cancer Detection in Mammograms using Deep Learning Techniques. *(Master's Thesis)*
- Jaamour, A. (2019), Content-Based Video Retrieval for Pattern Matching Videos. *(Bachelor's Thesis)*

## Projects

See full list of projects on *www.adam.jaamour.com* or *github.com/Adamouization.*

Seal Pup Aerial Imagery Classifier
- Top of the class classification results of seal pups from aerial imagery using neural networks.

Superconductors' Critical Temperatures Prediction
- Beating published paper's results using linear regression with regularisation techniques.

## Technical Skills

- **Main programming languages:** Python, Java and web-based languages (JavaScript ES6, HTML, CSS).
- **Python Machine Learning:** Tensorflow, Keras, Scikit-Learn, NumPy, Pandas, SciPy, Matplotlib and Seaborn.
- **Experience with frameworks:** Python (OpenCV, NLTK, Django, Flask) and web-based (Boostrap, JQuery, Node.JS, Jekyll, Highcharts, D3.js).
- **Experience programming in:** C, SQL (PostgreSQL), Bash, Haskell, MATLAB, Swift and Basic (AGKv2).
- **Tools used:** Jetbrains IDEs (PyCharm, Webstorm, IntelliJ), Jupyter, Vim, GitHub, Travis CI, Heroku and LaTeX.

## General Skills

- **Software engineering skills:** git version controlling, testing suite coverage, CI/CD, agile development, wireframe prototyping ands UML design.
- **Professional skills:** strong analytical, problem-solving, communication and team working skills.
- **Operating systems:** Linux (Fedora, Ubuntu and Debian), macOS and Windows.

## Awards & Certifications

- Dean's List Award - University of St Andrews (2020)
- RITTech Professional Registration (Specialist Area of Software Development) - BCS (2019)

## Languages

- **English:** Native
- **French:** Native
- **Spanish:** Limited working proficiency

## Extracurricular Activities

- **Sports:** Tennis, football, padel and golf.
- **Hobbies:** Karting, scuba-diving, free-diving, mountain hiking, filmmaking, philately and kendama.
- **Hackathons:** Competed at Bathack 2015 and LaunchPad 2017, in which we reached the finals.
- **Debating:** Member of the Science Debate Club, which our team won in 2014, and participation in the Model United Nations four times.

## References

Dr David Harris-Birtill
Lecturer & Thesis Supervisor
University of St Andrews, School of Comp. Science
dcchb@st-andrews.ac.uk

Jason Mowbray
Aerodynamic Systems Group Team Leader
Scuderia Toro Rosso F1 Team
jason.mowbray@tororosso.com

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School of Computer Science
Dr David Harris-Birtill

02/07/2020

Dear Sir/Madam,

It is my real pleasure to provide a reference for Adam Jaamour. I have known Adam Jaamour since January 2020 and it is my pleasure to be his dissertation supervisor for his Masters dissertation in Computer Science here at the University of St Andrews, in which he is doing really very well. It was also my pleasure to lecture him on Machine Learning which he has been truly exceptional.

Adam achieved the best final grade for CS5014 (Machine Learning) that we've ever had in the three years we've been running the module (since its inception). We have had 216 students on the course over that period and he has achieved a better grade than all others. This is a very impressive achievement as we have had some exceptionally brilliant students over that period, so to come top of an extremely good cohort over multiple years is really outstanding.

Adam is a very engaged student who works hard, and is genuinely interested and enthusiastic about whatever he is working on. He clearly has a drive to succeed and manages this in a friendly and upbeat way which means he is a delight to work with.

Adam is always very polite and professional, and is not afraid to ask insightful questions. He thinks about the problem at hand, engages with the ideas, implements fascinating and challenging extensions to projects and is able to communicate excellently.

Adam works very well in a team and also works very well independently, his real passion for learning and doing the best he can is evident in everything he does (participation in meetings, work on practicals, presentations etc).

I believe that Adam has the potential to achieve truly great things I hope that he is given the time, space, connections, environment, and experience for him to thrive.

I do hope that he is given every chance to reach his full potential,

Sincerely,

Dr David Harris-Birtill

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**Letter of Recommendation for Adam Jaamour**

11th of December, 2018

**To whom it may concern:**

I had the pleasure to manage Adam during his internship with the Aero Systems Group, within the Aerodynamics department of the Scuderia Toro Rosso Formula One Racing Team, between July 2017 and July 2018.

His work was of a very high standard and he has contributed a great deal to our projects. He exhibited excellent understanding of how his work influenced users and the importance of what he was doing. Adam was able to translate user requirements and business cases (regardless of scale) into changes to the systems in an excellent fashion, continually liaising with users and keeping developments on track. The quality of his code and his enthusiasm for system quality in general was very high. His software development skills were first rate at whatever task and in whatever language he encountered.

Adam set the standard within the group with his quality of documentation, release notes and weekly 'tips' emails; often an area of weakness with interns (along with code quality) - but not with Adam. His communication inside and outside the group has been very good, and all that have worked with him are very positive about his skills, manner and overall professionalism.

Outside of the software development area, Adam assisted with the recruitment and interview processes of the next set of candidates for the 2018-2019 internships. As part of this he was able to set up a direct contact between STR and the University of Bath to aid in our recruitment there and attended the Bath Placement Fair with me in February 2018 to make direct contact with prospective candidates. He presented the opportunities and the company professionally throughout and went above and beyond to help wherever possible.

I recommend Adam without reservation. Please do not hesitate to contact me with any questions.

Sincerely,

**Jason Mowbray**
Aero Systems Group Leader

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