

# Dany Majard | Applied Scientist

French Citizen – London, UK

📞 +44 741 287 1818 • ✉ d.majard@gmail.com • in dany-majard

*Holistic yet thorough.*

## Experience

### Principal Applied Scientist

Sept 2021 - Present day

*Streetbees (Market Research), Python/PyTorch/Tensorflow/NetworkX*

*London, UK*

- Managed and mentored a client facing team of Data Scientists while identifying the major risks, liabilities and opportunities when scaling the business.
- Lead a major shift in culture from project-centric to product-centric, establishing the code base and fostering repeatability and continuous development. The team now routinely uses GitHub, Jira and IDEs.
- Heavily refactored and documented the code base to reduce delivery time by 4 and allow quick onboarding.
- Refined a single market topic modeling and clustering POC for a major beverage corporation. Designed and implemented a production level pipeline to function over 22 markets, counting.
- Refined and productionized a competitive market analysis POC using user surveys on 6 markets, cementing a 3-year contract with a major food corporation.

### Data Scientist - Lead Data Scientist

Oct 2018 - Aug 2021

*Outra (Proptech), Python/SQL/Snowflake/Spark*

*London, UK*

- Managed a team of 3 Data Scientists + Engineer
- Built a 1-class Classifier of customers for geolocalized FB marketing, reducing the client's CPL from £40 to £13.
- Improved the performance of 28 gradient boosted models on property data, increasing its KPIs on 29M properties by >15%, outranking all competitors and unlocking a £200k contract with a major insurance company.
- Combined Machine Learning (LGBM) and statistical methods (Survival Analysis) to estimate propensity to move of UK households, resulting in £90k MRR in data sales within 6 months at virtually no marginal costs, thanks to an automated ETL, modeling and delivery pipeline.
- Used a Contextual Multi-Arm Bandit approach for Offer Mechanic automation for a restaurant chain which, combined with a restaurant segmentation, yielded a £100k annual contract.

### Data Scientist

Aug 2018

*Close Brothers (Consulting / Banking), Python/R/Alteryx*

*London, UK*

- Provided data science expertise as a service for an insurance broker the bank provides premium financing to.
- Delivered predictive models for 60 days cancellation reducing overhead costs for background checks by up to 30%
- Delivered predictive models for propensity to take financing allowing first year ROI to be positive.

### Professional Development

July 2017-July 2018

*Self-study and Online programs*

*Reims, France*

- Skills assessment
- Upskilling in programming, statistics, visualisation, engineering...

### Director of sales & customer relations

2014-2016

*Festka s.r.o. (cycling/luxury)*

*Prague, Czechia*

- Increased sales by 400% by establishing a global distribution network of 24 partners.
- Created a sales analytics and models tools with scripts on google sheets.
- Partnered with Pipefy.com on deployment of their kanban platform to our manufacturing processes.
- Excelled in customer care, with a satisfaction rate superior to 98%.

### Post-doctorate Fellow

2012-2014

*Masaryk University*

*Brno, Czechia*

- Continued work on own research program on higher cubical category theory and higher cubical groups.
- Developed and taught a course on graphical calculus and monoidal categories.
- Gave talks in many prestigious universities, including Cambridge and Oxford.

## Education

### Pivigo

*S2DS Fellowship*

Mini-MBA boosted, highly selective 5 week program supporting PhD holders in their transition to Data Science.

**London, UK**

*Aug 2018*

### Dept. of Mathematics, Kansas State University

**Manhattan, KS, USA**

*PhD, Mathematics*

*June 2012*

**Thesis** Cubical categories, TQFTs and possible new representations for the Poincare group

**Supervisor** Louis Crane

**Award** Hostinsky Outstanding GTA in Academics

**Abstract** This thesis contains a reformulation of Topological Quantum Field Theories of cobordisms with corners as higher cubical categories. It also investigates cubical categories as a gate to better formulating the coherence conditions for n-categories. Moreover it gives examples of double groups that are of significant importance for theoretical physics.

### CPT, Universite Aix-Marseille II

**Luminy, France**

*MSc, Theoretical, Mathematical and Particle Physics*

*June 2006*

**Thesis** 2nd Quantization of Colored Particles : Quest for the appropriate structure

**Supervisor** William Joyce, University of Canterbury, Christchurch, NZ

**Abstract** We address the need for expansion of the parastatistics of quarks to  $\text{Rep}(SU_3)$  accomodating its  $Z_3$  grading, leading to creation/anihilation "algebras" stemming from premonoidal categories. The emerging structure is a generalization of Lie algebras to weakly-associative tensor products that we named Rainbow algebras.

### IUT de Reims

**Reims, France**

*DUT Mesures Physiques*

*June 2001*

**Specialization** Materials and physico-chemical controls

**Internship** AFICA - Metal Refinery. Developed protocols for the Atomic Absorption Spectrophotometer of the incoming material chemistry lab, then ran the lab for 3 month before mentoring a technician for replacement.

## Projects

### Ethics // Law

**Colege des Bernardins**

*L'impact de l'autonomie technologique sur l'etat de droit*

*Jan 2019-May 2020*

Participatins as an AI expert in a working group on the impact of autonomous systems on the State of Law. The group will produce a report for the Ministry of Justice by the end of 2020

### Blockchain // Network Analysis

**Google**

*Cryptocurrencies , graph database, google BigQuery, SQL*

*June 2018-Oct 2018*

Joint work with Allen Day, science Advocate @Google. Analysis of the Bitcoin and Ethereum ledger to improve transparency and raise quantitative knowledge on the cryptocurrencies landscape and smart contracts dynamics.

### Other

#### Personal Journey

**Asia/Pacific**

*Travels*

*Jan-July 2017*

- o Rode a 2500+ km unassisted solo cycling trip and competed in the AHBPC 2017.
- o Visited the Tibetan government to explore opportunities teaching modern sciences to buddhist Monks and Nuns.
- o Visited Djalu Gurruwiwi, elder of the Galpu clan in Arnhem Land, Australia, guardian of 60000+ years of wisdom.

#### EHBA - European Hardcourt Bikepolo Association

**Europe**

*Founding Board Member, Head*

*2014-2016*

- o Developed the foundations of the organization around 6 poles of development, each with a 2 year mission statement.
- o Established and maintained communication with the North American and Pacific organizations.
- o Leader in the establishment of rulesets and referees in the sport.

## Languages

### French

Native

### English

Fluent

### Japanese

Beginner

### Czech

Beginner

### German

Beginner

## Interests

**Sport:** Played Hardcourt Bikepolo at an international level with Prague's based "Golem". Acroyoga practitioner

**Board Games:** Great way to sharpen analytic and social skills. Regular volunteer for Stronghold publishing. Hosting events at the workplace