

Dany Majard | Data Scientist

Globally Mobile – France

✉ dany@ledata.science • 🌐 leData.science • in dany-majard

Versatile mathematician excelling in research and customer satisfaction with a proven track record of leadership, initiative, autonomy and adaptability.

Projects

Ether blockchain // Network Analysis

Google

Cryptocurrency, ether tokens, graph database, google BigQuery, SQL

Mar 2018-

Performing analysis of the ether space to improve transparency and raise quantitative knowledge on smart contracts dynamics.

AdTracking // Fraud Detection

Kaggle Competition

Time Series, feature engineering, hyperparameter optimization

Mar-Apr 2018

Constituted a team with machine learning students to tackle this cyber fraud challenge.

Blight in Detroit // Binary classification

Capstone Project

Geolocation, NLP, webscraping (python, pandas, sklearn)

Nov 2017

Using blight violation tickets and parcel data from Detroit Open Data to predict blight in the city, which is a major problem the city is facing. Extensive EDA and cleaning was needed for models to make factual sense and prevent harmful bias.

Corporacion Favorita stores // forecasting

Kaggle Competition

Time series, feature engineering, clustering (python, pandas, sklearn)

Jan 2018

Top 10 Kernel - Using 5 years of sales data across 52 stores of the ecuadorian chain, the goal was to predict sales for optimal stocking. I used unsupervised machine learning to create a cluster feature for a gradient boosting regressor.

Education

University of Washington

Coursera.com

Specialization "Data Science at Scale"

Sept-Nov 2017

R, Python, SQL, NoSQL, Distributive processing (Pig on Hadoop), Machine Learning, Vizualization principles, Ethics

University of Michigan

Coursera.com

Specialization "Applied Data Science with Python"

Sept-Oct 2017

Exploratory Data Analysis, NLP (Natural Language Processing), Text Mining, Social Network Analysis, Machine Learning

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 adress 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.

Experience

Vocational.....

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

Prague, Czechia

Director of sales & customer relations

2014-2016

- Voluntarily left in excellent standing with a track record of success.
- 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%.

Masaryk University

Brno, Czechia

Post-doctorate Fellow

2012-2014

- 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.
- Organized weekly meetings for research updates and brainstorming.

Kansas State University

Manhattan, KS, USA

Graduate Teaching Assistant

2007-2012

- Mentored undergraduate research.
- Taught and graded Plane Trigonometry, College Algebra and Calculus, Elementary Differential Equations and Applied Matrix Theory
- Coordinated Plane Trigonometry

Other.....

Personal Journey

Asia/Pacific

Travels

Jan-July 2017

- Rode a 2500+ km unassisted solo cycling trip and competed in the AHBPC 2017.
- Visited the Tibetan government to explore opportunities teaching modern sciences to buddhist Monks and Nuns.
- 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

- Developed the structural foundations of the organization.
- Maintained communication with the North American and Pacific organizations.
- Restructured EHBA around 6 poles of development, each with a 2 year mission statement before resigning.

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.

Publications

Recursive Internalization I, II & III

Series of papers on the generation of weak higher cubical categories

Ongoing

N-tuple groupoids and optimally coupled factorizations

Theory and Applications of Categories, Vol. 28, No. 12, 2013, pp. 304–331

2013

N-tuple groupoids and matched n-tuple of groupoids

arxiv.org/abs/1201.0059

2012

On Double Groups and the Poincaré group

arxiv.org/abs/1112.6208

2011