Ignacio P. Navarro

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Education

Imperial College London, 2014 - 2018
Joint Mathematics and Computer Science,
Master of Engineering, **First Class Honours**
Relevant courses: Distributed Systems, Network and Web Security, Coding Theory, Galois Theory, Group Theory, Number Theory, Analysis, Algebra, Operating Systems, Algorithms, Logic, Architecture

American School of Valencia, 2010 - 2014
Valencia, Spain.

Spanish Selectividad Entrance Exams: Spanish History (10/10), Mathematics (10/10), Biology (7/10), Physics (10/10), Spanish Literature (10/10), English (10/10)

American College Testing: (ACT 35/36)

SAT Subject Tests: Math II (800/800), Molecular Biology (800/800), Physics (800/800)

GRE: Quantitative (160/170), Verbal (158/170), Essay (5.5/6)

Research Experience

Master's Thesis (2017-2018)

On Yao's Problem and Adaptively Secure Garbled Circuits
An investigation to modify Yao's scheme to ensure adaptive security.
Supervisor: Dr. Mahdi Cheraghchi

Individual Research Paper (2017)

A Divisibility Problem in the McKay Conjecture
We investigate and propose three conjectures on a variation of a well-known problem in representation theory, the McKay Conjecture. (https://arxiv.org/abs/1711.00642)

J.P. Morgan Intelligent Solutions (2017)

Intern and Technology Analyst
Heavily research-focused internship that relied on studying the literature on Data Science and Machine Learning to implement anomaly detection algorithms.

Group Research Project (2015-2016)

A Proof Assistant in Category Theory Using String Diagrams
String diagrams are a two-dimensional notation for expressions in category theory. We show an interactive proof assistant that relies on these to visually embed some of the laws of category theory, resulting in intuitive and elegant proofs.
Supervisors: Prof. Susan Eisenbach, Dr. Tony Field

Employment

J.P. Morgan, Aug 2018 - Present
Software Engineer.

J.P. Morgan, Jun 2017 - Sep 2017
Data Scientist working on anomaly detection on market data.

IMSK, Summer 2017
Sole application and web developer for the European Musculoeskeletical Institute.
`www.imsk.es`

Undergraduate Teaching Assistant (TA), Imperial College, Sep 2016 - Apr 2017
TA for first year students. Met weekly for a one-hour session, and marked lab exercises.

Eduvapp, Dec 2016 - Jun 2017
Sole developer for an application that connects students to private tutors. Written in Django with a PostgreSQL database. Later extended this project to support an iOS app.

Sea Saffron, Aug 2016 - Sep 2016
Web developer for a startup that offers tours of cities through gastronomy.

Accomplishments

Computing Entrance Scholarship, Imperial College London

Stand-out third year group project, Imperial College London

Engineering Dean's List, 2nd Year, Imperial College London

Mathematics and Science Award, American School of Valencia

Top 1% ACT

Programming

Java (Excellent): Strong general knowledge of the language.

Python (Excellent): Used for small projects and web development (Django)

C++/C (Strong): Experience in object problem modeling in C++ such as programming the Enigma machine, or building an emulator and assembler with ARM architecture in C.

Haskell (Strong): First programming language I learned. Built a compiler in as a group project second year. Being a functional programming language, I believe it gave me a strong mindset for the following programming languages.

Interests and Skills

Coding theory, cryptography, algorithms, privacy. In general however, I'm just interested in fields of computer science where math plays an important role.

Data science (in particular anomaly detection), time series analysis, and Big Data.

Github: `github.com/nachonavarro`