Juan Antonio Navarro Pérez

Contact

- London, UK
- juan@nokyotsu.com
- nokyotsu.com/me

Skills

Python | TensorFlow

Java | C/C++

Google Cloud

Data Analysis | Algorithms

Static Program Analysis

Logic Programming

Symbolic Programming

HTML | CSS

JavaScript | LaTeX

Languages

English: Fluent
Spanish: Native
German: Intermediate

Talented and self-driven software engineer with 13+ years of work experience, I have solid problem-solving and critical-thinking skills due to my formal training in scientific research. My background in mathematics and theoretical computer science has been critical to the success of the products and innovations I consistently deliver.

💼 Employment

Google, UK | Senior Software Engineer of Avera AI
Dec 2019 – Present

Designed and led a team of engineers to implement a cloud-based financial services product to efficiently calculate pricing and risk factors. Devised algorithms to statically analyse and transform TensorFlow code. Filed two patent applications for this work.

Google, UK | Senior Software Engineer of Chrome on Android
Aug 2014 – Dec 2019

Worked on making Chrome's performance testing infrastructure more stable and robust. Led efforts to automatically distil hundreds of thousands of lab-gathered metrics into actionable insights for decision-makers. My work prevented significant regressions reaching billions of Chrome and WebView users on Android. And it still does.

As a 20% project, I implemented numerical optimisation algorithms in TensorFlow, halving the runtime of some production pipelines.

University College London | Computer Science Lecturer
Aug 2012 – May 2015

Designed and implemented *Asterix*, a theorem prover for assertions about memory allocation in computer programs, still *regarded as the most efficient in its category* by the research community. Taught lectures on logic and computer science theory. Awarded an EPSRC grant (£98k) to fund my research programme.

Queen Mary, University of London | Computer Science Lecturer
Jan 2012 – Aug 2012

Taught a master's lecture on intelligent agents and multi-agent systems.

Technische Universität München | Visiting Researcher
Jan 2010 – Dec 2011

Developed an algorithm for automatically proving theorems in *separation logic*; this would later become the basis for *Asterix*.

Max Planck Institute for Software Systems | Postdoctoral Researcher
Feb 2008 – Jan 2010

Carried out research on logic programming for distributed systems. As a side project, researched the spread of content (music, news, video) through blog networks and won a best paper award for this work.

🎓 Education

The University of Manchester | PhD in Computer Science
2004 – 2007

Conducted research into real-world applications of automated theorem proving. Funded with a scholarship (~£75k) awarded by the Mexican Council of Science and Technology.

Universidad de las Américas Puebla | Master in Computer Science
2003 – 2005

Ranked 1st in class, awarded *magna cum laude*. Mathematically proved the equivalence between several non-classical logic formalisms with applications to logic programming.

Universidad de las Américas Puebla | BSc in Mathematics
1999 – 2003

Ranked 1st in class, awarded *magna cum laude*. Began research into non-classical logic formalisms for common sense reasoning.

🎖 Notable awards

Honourable Mention at the World Finals of the *International Collegiate Programming Contest (ICPC)*, 2004.

Third Place at the World Finals' Java Challenge of the *International Collegiate Programming Contest (ICPC)*, 2004.

Honourable Mention at the World Finals of the *International Collegiate Programming Contest (ICPC)*, 2003.

1st Place at the National Competition of the *Mexican Mathematics Olympiad*, 1998.

📖 Selected publications

JA Navarro and A Rybalchenko. **Separation logic + Superposition calculus = Heap theorem prover**. In: *Proceedings of the conference on Programming Language Design and Implementation (PLDI)*, 2011. ACM.

M Cha, JA Navarro, and H Haddadi. **Flash floods and ripples: The spread of media content through the blogosphere**. In: *Proceedings of the Annual Conference on Weblogs and Social Media (ICWSM)*, 2009. *Winner of best paper award*.

M Osorio, JA Navarro, JR Arrazola, and V Borja. **Logics with common weak completions**. *Journal of Logic and Computation*, 16(6):867–890, 2006. Oxford University Press.

✿ Interests

Philosophy   Ethics   Science communication   Scientific skepticism   Lego

Food   Cooking   Humanism   Social justice