

GABRIEL POESIA (poesia@stanford.edu)

EDUCATION

- 2019 - 2025 (EXPECTED) PhD student in Computer Science
STANFORD UNIVERSITY, CA, US
Research topics: Artificial Intelligence, Education, Program Synthesis, Human-Computer Interaction
- 2015 - 2017 Master of Science in Computer Science
FEDERAL UNIVERSITY OF MINAS GERAIS, Brazil
Dissertation title: “Dynamic Dispatch of Context-Sensitive Optimizations”.
Advisor: Fernando Magno (dcc.ufmg.br/~fernando).
- 2011 - 2015 Bachelor of Science in Computer Science
FEDERAL UNIVERSITY OF MINAS GERAIS, Brazil
Graduated with honors (3rd best GPA in graduating CS class)

ACADEMIC PUBLICATIONS

- COGSCI 2022 *G. Poesia, N. Goodman.* Left to the Reader: Abstracting Solutions in Mathematical Reasoning
- ICLR 2022 *G. Poesia, A. Polozov, Vu Le, A. Tiwari, G. Soares, C. Meek and S. Gulwani.* Synchromesh: Reliable Code Generation from Pre-trained Language Models
- NEURIPS 2021 *G. Poesia, W. Dong and N. Goodman.* Contrastive Reinforcement Learning of Symbolic Reasoning Domains
- EMNLP 2021 *J. White, G. Poesia, R. Hawkins, D. Sadigh and N. Goodman.* Generating Informative, Open-domain Clarification Questions Without Question Examples
- AAAI 2021 *G. Poesia and N. Goodman.* Pragmatic Code Autocomplete
- OOPSLA 2020 *G. Poesia and F. Pereira.* Dynamic Dispatch of Context-Sensitive Optimizations
- OOPSLA 2017 *G. Poesia, B. Guimarães, F. Ferracioli, and F. Pereira.* Static placement of computation on heterogeneous devices.
- ECML/PKDD 2014 *G. Poesia and L. Cerf.* A lossless data reduction for mining constrained patterns in n-ary relations.

INDUSTRY EXPERIENCE

- APR–SEP 2021 Research Intern at MICROSOFT, Redmond
Joint project between PROSE (Sumit Gulwani, Vu Le) and MSR (Alex Polozov, Chris Meek) on semantically constraining the output of language models (GPT-3, Codex) when synthesizing programs from natural language.
- AUG 2017 - AUG 2019 Co-founder and CEO at LOOPYE, Brazil
Founder of an startup developing innovative technologies for programming education. We developed a full-fledged platform for learning programming with JavaScript, and automated feedback tools using Static Analysis and Program Synthesis.
- FEB–APR 2016 Software Engineer Intern at FACEBOOK
Worked with the HHVM team on BOLT (Binary Optimization and Layout Tool). Worked on updating DWARF debugging information during binary optimizations using LLVM.
- FEB–MAY 2015 Software Engineer Intern at FACEBOOK
Worked on the Data Infrastructure team, implemented anomaly analyses for Hadoop clusters.
- OCT-2014 – JAN-2015 Software Engineer Intern at GOOGLE
Worked in the Search Quality team improving results of Google Web Search.

OTHER ACHIEVEMENTS

- 2011 - 2015 Competitor and World Finalist
ACM - INTERNATIONAL COLLEGIATE PROGRAMMING CONTEST
I have trained for and competed very actively to algorithmic competitions. In 2014, my team qualified to the World Finals of the ACM-ICPC in Morocco, being 5th in the Brazilian Regional. In 2015, we were awarded a bronze medal in that regional.
- 2016 Science Slam Brazil finalist (national scientific communication contest)
EURAXESS - EUROPEAN COMMISSION
I was one of the 5 national finalists in the scientific communication contest held by the European Commission in Brazil. Graduate students and professors participated. I presented my OOPSLA paper with a small play that uses analogies between computer architectures and kitchens.
- 2017 Almundo Latin America Challenge Winner
ALMUNDO
Won a competition by an Argentine company which consisted of providing the best possible solution to an NP-hard problem inspired by the TSP. Won a full trip to Madrid.