

Guruprerana Shabadi

Master's Student in Computer Science

École Polytechnique, France

guruprerana.github.io

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Research interests: Safe autonomy, program synthesis, neurosymbolic programming, formal methods, reinforcement learning, control, cyber-physical systems

Education

- **École Polytechnique and Université de Paris Cité** Paris, France
M.S., Computer Science (MPRI) Sep. 2022 - Present
- **École Polytechnique** Palaiseau, France
B.S., Mathematics and Computer Science Sep. 2019 - Jun. 2022
 - GPA: 4.2/4.3, Summa cum laude

Research experience

- **IMDEA Software Institute** Madrid, Spain
Research Intern Apr. 2024 —
 - Advisor: Alessio Mansutti
 - Topic: Integer linear-exponential programming
- **Institute of Informatics, University of Warsaw** Warsaw, Poland
Research Intern Apr. 2023 - Aug. 2023
 - Advisor: Nathanaël Fijalkow (Automata Theory Group)
 - Topic: Programmatic reinforcement learning
- **INRIA** Paris, France
Research Intern Jan. 2022 - Mar. 2022
 - Advisor: Caterina Urban (ANTIQUE Team)
 - Topic: Static analysis of data science notebooks using abstract interpretation
- **Department of Computer Science, École Polytechnique (LIX)** Palaiseau, France
Research Intern Jun. 2021 - Dec. 2021
 - Advisor: Sergio Mover (Cosynus Team)
 - Topic: Accounting for communication delays arising in cyber-physical systems

Publications

- **Guruprerana Shabadi**. Towards programmatic reinforcement learning: the case of deterministic gridworlds. In Student Research Competition at POPL 2024.
- Luca Negrini, **Guruprerana Shabadi**, Caterina Urban. Static Analysis of Data Transformations in Jupyter Notebooks. In SOAP at PLDI 2023.

Awards

Global Undergraduate Awards - Global Winner in Computer Science (recognized for work on <i>Static Analysis of Data Science Notebooks</i>)	Sep. 2022
Labex DigiCosme Scholarship	2022-2023
Excellence Scholarship from the École Polytechnique Foundation	2019-2022
DGA Scholarship from the French Directorate General of Armaments	2021-2022

Projects

- **Anemone** Paris, France
Entrepreneurial Project Oct. 2020 —
 - As the CTO, I lead the application development team at Anemone
 - We are a team of 4 student entrepreneurs building a socio-professional networking platform tailor-made to the needs of the artistic industry

Skills

Languages: C/C++, Python, Coq, Haskell, OCaml, JavaScript, Java, HTML-CSS, x86 Assembly

Frameworks: Django, Vue.js, Android, React, React Native, Pandas, Scikit-learn, Tensorflow, Qt

Spoken languages: English (native), French (advanced working proficiency), Kannada, Hindi

Volunteer Experience

- **Developer Student Club of École Polytechnique**
Developer Student Club Lead Sep. 2020 - Jun. 2021
 - As a part of the Google DSC Program, led a team in organizing educational events, workshops, and competitions about various platforms and technologies, including cloud and AI.
- **Student Body of École Polytechnique**
Chief Financial Officer Jun. 2020 - Jun. 2021
 - I was incharge of accounting, and gathering of sponsorships and funds, in addition to organizing the social and cultural life on campus.
- **Mental health committee at École Polytechnique**
President Jun. 2020 - Jun. 2021
 - Spreading awareness of mental health issues and providing resources to seek help.