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

- **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 *Static Analysis of Data Science Notebooks*)	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.