

# Guruprerana Shabadi

PhD Student in Computer Science  
University of Pennsylvania

[guruprerana.github.io](https://guruprerana.github.io)  
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## Education

- **University of Pennsylvania** Philadelphia, US  
*PhD, Computer Science* Aug. 2024 —
- **École Polytechnique and Université de Paris Cité** Paris, France  
*M.S., Computer Science (MPRI)* Sep. 2022 - Aug. 2024
- **École Polytechnique** Palaiseau, France  
*B.S., Mathematics and Computer Science, Summa cum laude* Sep. 2019 - Jun. 2022

## Research experience

- **IMDEA Software Institute** Madrid, Spain  
*Research Intern* Apr. 2024 - Aug. 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 - Jul. 2024*
  - 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.