

João Ricardo Silva Matos

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 João Matos |  joaorsmatos02

Lisbon, Portugal

EDUCATION

- **PhD. Candidate in Computer Science** Exp. September 2026
Instituto Superior Técnico, University of Lisbon
School of Computer Science, Carnegie Mellon University
◦ Dual degree program jointly conferred by IST and CMU
Lisbon, Portugal; Pittsburgh, USA
- **MSc. in Computer Science and Engineering** September 2023 - November 2025
Instituto Superior Técnico, University of Lisbon
Lisbon, Portugal
◦ Double specialization in Algorithms and Cybersecurity
◦ Worked under the supervision of Prof. Pedro Adão
◦ Dissertation: "Controlling Path Explosion in x86 Symbolic Execution" (19/20) 
◦ Final grade: 18/20
- **Erasmus+** February - July 2024
Akademia Górniczo-Hutnicza (AGH University of Kraków)
Kraków, Poland
◦ Exchange semester under the Erasmus+ program
◦ Completed certification for A1 level in Polish
- **BEng. in Informatics Engineering** September 2020 - July 2023
Faculty of Sciences, University of Lisbon
Lisbon, Portugal
◦ Took two extra courses on programming competitions
◦ Final grade: 17/20

OTHER ACADEMIC ACTIVITIES

- **BIP Unite short course in Cybersecurity** October - November 2025
Université Grenoble Alpes
Grenoble, France
◦ Participated with peers on a case study about cache template attacks
◦ Worked under the supervision of Prof. Daniel Gruß
◦ Grade: A
- **BIP Unite short course in Artificial Intelligence** September - October 2024
Université Grenoble Alpes
Grenoble, France
◦ Worked on a case study on sustainable AI
◦ Grade: 19/20

TEACHING EXPERIENCE

- **Instituto Superior Técnico ** Sep. - Nov. 2024; Sep. 2025 - Jan. 2026
Teaching Assistant
Lisbon, Portugal
◦ Forensic Cybersecurity (2025/26; 2024/25):
 - * Taught weekly lab classes
 - * Prepared and graded the course project
- Software Security (2025/26):
 - * Taught two lab classes per week
 - * Graded the course project and respective written test

EXPERIENCE

• ThinkOpen Solutions

Software Developer

September 2025 - Now
Oeiras, Portugal/Remote

- Currently working as a software developer for the Odoo platform
- The developer team creates custom modules according to customer needs
- Projects involve Python, XML, and JavaScript
- Also perform system administration duties

• Premium Minds

Software Engineering Intern

July - August 2023

Lisbon, Portugal

- Developed an internal application for employee timekeeping and salary calculations
- Application was created using Java and NextJS

PROJECTS

• Externalization of concretization and state merging policies in symbolic execution

Aug. 2024 - Nov. 2025

Tool: AVD symbolic executor

- Implemented a modified version of the CS_{ML} language for concretization policies
- Created a new language based on CS_{ML} for the specification of merge policies, MC_{ML}
- Modified AVD, a symbolic engine created at Técnico, adding support for these languages
- Created a VSCode extension that supports linting and syntax highlighting for these languages 
- Created a testing framework for symbolic execution engines

HONORS AND AWARDS

• Instituto Superior Técnico Academic Excellence Award

2026

Instituto Superior Técnico, University of Lisbon



- Awarded for my academic performance in the 2024/25 academic year
- Award is given every academic year to the top 10% of students (ECTS grade A) with a yearly average of at least 18/20

• Instituto Superior Técnico Academic Merit Award

2025

Instituto Superior Técnico, University of Lisbon



- Awarded for my academic performance in the 2023/24 academic year
- Award is given every academic year to the top 25% of students (ECTS grade B) with a yearly average of at least 17/20

• Faculty of Sciences Merit Award

2022; 23

Faculty of Sciences, University of Lisbon



- Awarded twice for my academic performance in the 2020/21 and 2021/22 academic years
- Award is given to students with a year average higher than 16/20 (1st year) or 16.5/20 (2nd year)

OTHER ACTIVITIES

• Participated in the Guinness World Records' world's largest programming class

2024

Instituto Superior Técnico, University of Lisbon

• Member of the Ribeiro Santos student dorm board

2022-2023

University of Lisbon

• Competed in the MIUP'21 national university programming competition

2021

Instituto Superior Técnico, University of Lisbon

ADDITIONAL INFORMATION

Languages: Portuguese (native), English (fluent, [certified C1](#)), Spanish (fluent), Polish (basic, certified A1)

Interests: Computability; Computational Complexity; Cybersecurity; Formal Verification

REFERENCES

1. **Pedro Adão**

Associate Professor, Department of Computer Science and Engineering
Instituto Superior Técnico
Email: pedro.adao@tecnico.ulisboa.pt
MSc. & PhD. Thesis Advisor

2. **José Fragoso**

Assistant Professor, Department of Computer Science and Engineering
Instituto Superior Técnico
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MSc. Thesis Reviewer & PhD. Co-Advisor

3. **Ruben Martins**

Assistant Research Professor, School of Computer Science
Carnegie Mellon University
Email: rubenm@andrew.cmu.edu
PhD. Co-Advisor

4. **Nuno Santos**

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Forensic Cybersecurity Lecturer