

INTO THE UNKNOWN

FROM LASIGE TO CMU AND A SILICON VALLEY STARTUP

Carnegie
Mellon
Portugal



CATARINA GAMBOA

BACKGROUND



Bachelor and Masters @ FCUL

2021 Master thesis @ Lasige
Co-advisor from CMU

2022 Dual-Degree PhD CMU-Portugal
Software Engineering
@Lasige, FCUL
@Carnegie Mellon University



Summer 2024 Internship @ Gitar



Highlights of what I learned and how it shaped my research



Image: Pi

7k PhD students



7 departments

60 PhD students in SE

Private institution (\$\$\$)

DIVERSE BUT ALL WITH THE SAME GOAL

LASIGE
reliable
software systems



DISCUSSIONS AND CRITICAL THINKING

LASIGE reliable software systems

Core Course

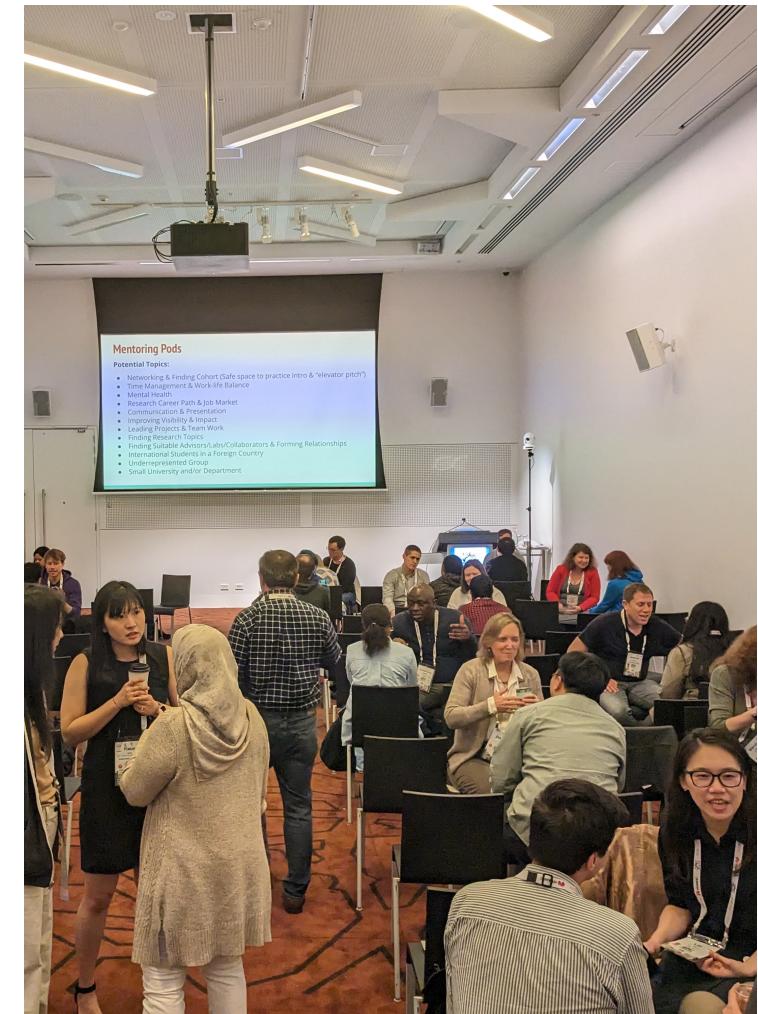
5 papers every 2 days + questions

Discuss them with professors

ICSE Shadow Program Committee

We reviewed and discussed papers

No paper is *perfect*





How to **Present your research**

Everyone required to present 1 talk per semester

How to **Give feedback**

Everyone can ask questions and provide constructive feedback

Networking

Conferences

Visiting researchers



Now

Vis



Summer Internship





Years of
tech debt,
goodbye

Gitar uses advanced AI and code analysis
to clean and maintain the largest
codebases in the world

Code analysis and
transformations for
feature flag cleanup
across languages

< 1 year

Half of the team has PhDs
In Programming Languages

**Help developers clean and
maintain really large codebases**

The screenshot shows a code editor interface with a dark theme. At the top, there are tabs for Java, Kotlin, JS, Python, Go, TSX, and Ruby, with Java being the active tab. Below the tabs is a code editor window containing the following Java code:

```
// Check the 'is-dark-mode-enabled' feature flag for the specified user
boolean flagValue = client.boolVariation("is-dark-mode-enabled", context, false);
if (flagValue) {
    // The code to run if the feature is on
    System.out.println("Dark mode!");
} else {
    // The code to run if the feature is off
    System.out.println("My eyes, they burn!");
}
```

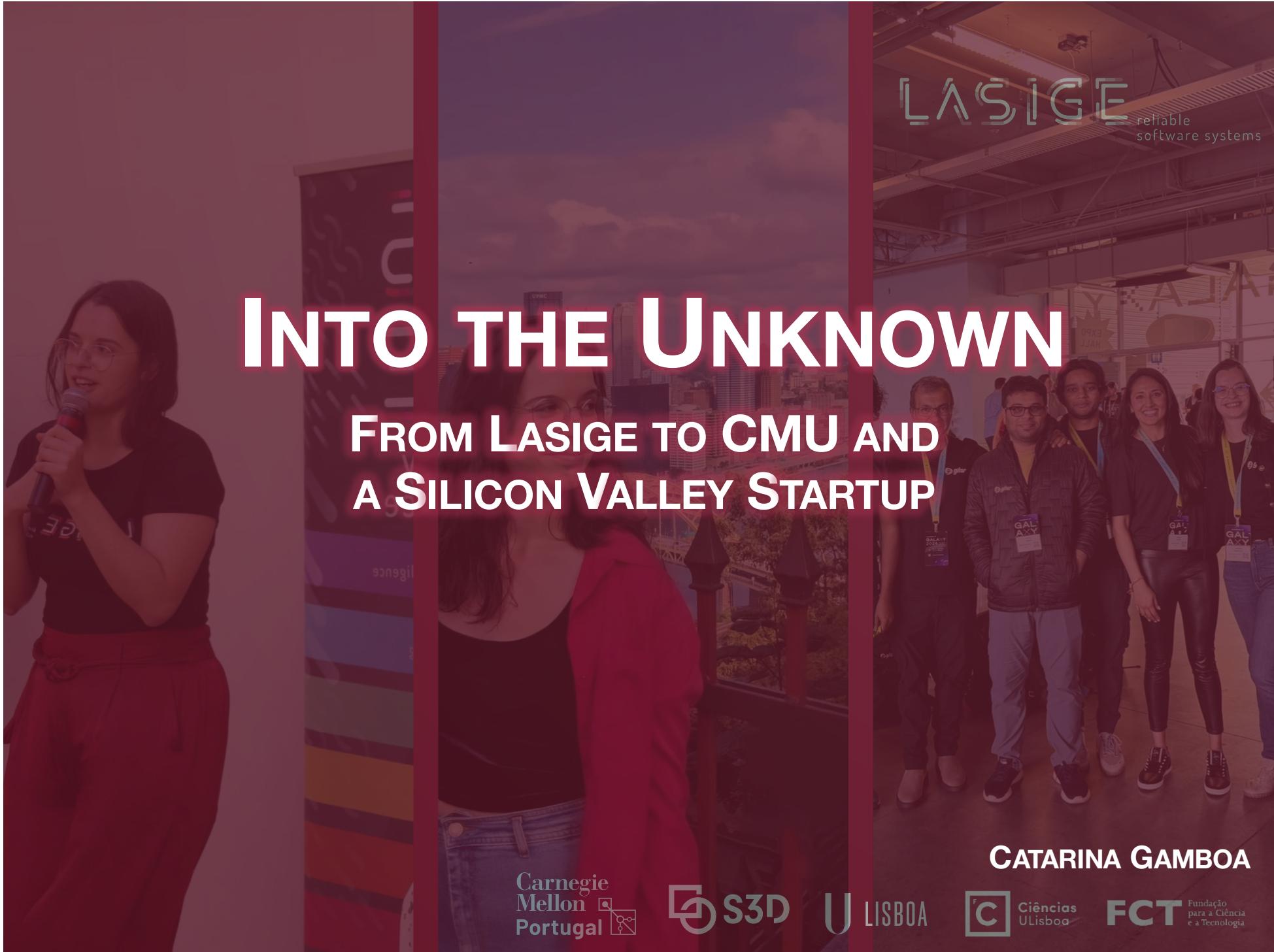
Responsibility

Pivot between areas
Fast-pace



Engineering vs Business





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