Jaime Correia

Software Engineer / Researcher
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EDUCATION

UNIVERSITY OF COIMBRA
PhD Candidate in Information Technology
Present | Coimbra, Portugal
Researching performance modeling and observability in Fine-Grained Distributed Systems (e.g., μServices)

UNIVERSITY OF COIMBRA
MSc in Software Engineering
September 2016 | Coimbra, Portugal

UNIVERSITY OF COIMBRA
BSc in Computer Science
September 2014 | Coimbra, Portugal

LANGUAGES

Portuguese (Native)
English (Fluent)
Spanish (Basic)

LINKS

Homepage:// **jaime.pro**
Github:// **jaimelive**
LinkedIn:// **jaimecrr**
Keybase:// **jaimelive**
Twitter:// **@jaimelive**
GoogleScholar:// **Jaime Correia**

SKILLS

SOFTWARE ENGINEERING
Requirement Elicitation and Analysis • Solution Architecture • Planning • Project Management • Documentation • Automated Testing • CI/CD • DevOps • Networking • Infrastructure Provisioning

PROGRAMMING LANGUAGES
Java • Python • R • C • C# • SQL • PHP • HTML • CSS • JavaScript

TOOLING
LaTeX• Linux • Git • Terminal • KVM • QEMU • libvirt • JetBrains IDEs • Sublime Text • Docker • Kubernetes • Terraform • Ansible • OpenAPI • MySQL • PostgreSQL • Adobe Illustrator • Adobe Photoshop

ABOUT

I am a Software Engineer turned Researcher who enjoys designing elegant solutions to interesting problems. From management, architecture, development and even infrastructure and network deployment, I am competent in all layers of the stack.
My research interests are modeling and improving the observability of Fine-Grained Distributed Systems.

EXPERIENCE

MEDICINEONE, LIFE SCIENCES COMPUTING
Software Engineering Intern (MSc Internship)
September 2015 – Sep 2016 | Coimbra, Portugal
Designed and developed a scalable, soft real-time event aggregation, analysis, visualization and subscription platform.

- Elicited requirements and designed solution.
- Defined non-functional requirements and tests for validation and acceptance.
- Designed architecture and selected technological stack (C#, Mesos with Marathon, Kafka, Cassandra, Druid, and Apache Storm).
- Created declarative, reproducible infrastructure provisioning and solution deployment pipeline.
- Provisioned infrastructure, deployed and validated solution.
- Documented solution.

RESEARCH

CENTRE FOR INFORMATICS AND SYSTEMS OF THE UNIVERSITY OF COIMBRA (CISUC)
Researcher
September 2016 – Present | Coimbra, Portugal
Worked with **Filipe Araújo** to improve performance modeling, and by necessity, observability in Fine-Grained Distributed Systems (e.g., μServices)

- Researched automated modeling and parameterization methods, using discrete system modeling techniques, to model the performance of Fine-Grained Distributed Systems.
- Helped develop tooling to work with distributed tracing datasets, from ingestion to analysis and visualization.
- Assisted in supervising and managing MSc students during their final engineering / research projects.

PUBLICATIONS

[1] A. Bento, J. Correia, R. Filipe, F. Araujo, and J. Cardoso. Automated analysis of distributed tracing: Challenges and research directions. *Journal of Grid Computing*, 19(1):1–15, 2021.

[2] J. Correia, F. Ribeiro, R. Filipe, F. Arauio, and J. Cardoso. Response time characterization of microservice-based systems. In *2018 IEEE 17th International Symposium on Network Computing and Applications (NCA)*, pages 1–5. IEEE, 2018.

[3] S. Lima, J. Correia, F. Araujo, and J. Cardoso. Improving observability in event sourcing systems. *Journal of Systems and Software*, page 111015, 2021.

[4] F. Pina, J. Correia, R. Filipe, F. Araujo, and J. Cardroom. Nonintrusive monitoring of microservice-based systems. In *2018 IEEE 17th International Symposium on Network Computing and Applications (NCA)*, pages 1–8. IEEE, 2018.