Ruan Comelli

Software engineer building tools that developers love using: from automation to AI integration to static analysis. Focused on code quality, developer experience, and robust systems design.

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Work Experience

Senior Software Engineer @ Sourcery AI   Nov 2021 - Feb 2025
- Developed LLM-powered systems for automated code review and bug fixing, deployed in Linux environments
- Re-architected an event-driven GitHub/GitLab bot infrastructure supporting natural language comment commands
- Implemented automated PR titles and summaries; Mermaid diagram visualization; and security-focused reviews — all widely adopted and loved by users
- Built evaluation datasets and scripts for AI-generated patches, using LangSmith for testing and observability
- Improved CLI, GitHub Actions, and IDE extensions to streamline workflows and increase adoption
- Led codebase modernization by replacing Black and PyLint with Ruff, making linting and formatting near-instantaneous; upgraded Python/runtime dependencies for a smoother dev experience
- Enhanced our static analysis and refactoring engine, adding linting and refactoring rules

Tech Lead @ Elint Tech   Dec 2020 - Nov 2021
- Led a team of 4 engineers in developing a proof-of-concept for automated PDF data extraction, successfully delivering a solution that was adopted by the client
- Architected and implemented a custom OCR solution that outperformed state-of-the-art commercial tools, including Google Vision, by combining Tesseract with modern open-source models
- Designed and implemented serverless document processing pipelines using infrastructure-as-code

Skills

- **Rust Programming**: Actively learning, building expertise through personal projects; contributed to the Rust compiler.
- **Other Programming Languages**: Python (primary, extensive experience), C/C++ (familiar), Shell scripting
- **Operating Systems**: Linux (Ubuntu, 8+ years of personal and professional use), Windows (familiar)
- **AI & Data**: Pydantic, PydanticAI, LangChain, LangSmith, LangGraph; LLM integration, prompt engineering, model evaluation; TensorFlow, PyTorch, OpenCV; NumPy, Pandas, Polars, SQLAlchemy
- **Backend, Tooling & DevOps**: UV, Pipenv; Click, Typer, MkDocs, Sphinx; CI/CD, Git, GitHub, GitHub Actions; Flask, FastAPI, Docker, GCP, AWS
- **Code Quality & Testing**: Ruff, MyPy, Tree-sitter; Pytest, CodeCov, TDD; focus on type safety, maintainability, robust test coverage, and comprehensive documentation
- **Architecture, Product & Strategy**: Systems architecture, domain-driven design, modularization, API/service design, event-driven systems, product vision, prototyping & MVP development, user-centric design, metrics-driven decisions, emerging tech adoption, stakeholder collaboration
- **Communication & Collaboration**: Clear verbal & written communication, async/sync collaboration, active listening, excellent mentor-level code reviews, user & dev documentation, meeting facilitation, cross-functional teamwork
- **Mindset & Problem Solving**: Critical thinking, adaptability, proactivity, continuous learning, positive attitude
- **Open Source & Personal Projects**: Created Brag AI (still v0.1!), a CLI tool that turns Git commits into polished achievements using LLMs. Open-sourced my Master's deep learning research in Boiling Learning.
- **(Human) Languages**: English (professional), Portuguese (native)

Education

Master's in Mechanical Engineering @ Universidade Federal de Santa Catarina   2019 - 2023
- Built an AutoML-optimized CNN for pool boiling heat flux estimation on 200,000+ images
- Reduced prediction error by 73–80% with a CNN up to 96% smaller than the previous state-of-the-art
- Published in Elsevier's Applied Thermal Engineering: Paper | Thesis

Bachelor's in Mechanical Engineering @ Universidade Federal de Santa Catarina   2014 - 2018
- Worked as a junior researcher for 2.5 years, developing numerical simulators in C++ for computational fluid dynamics