

Tulip S. Amalie

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Experience

OnTrackNorthAmerica

Philadelphia, PA

Technical Writer

Feb 2025–Present

- Wrote extensive technical documentation for a non-profit of over 30 volunteers
- Tailored complex, highly technical writing to different levels of knowledge to ensure proper tool usage
- Provided a 25% reduction in average new volunteer onboarding time via clear, concise writing
- Created an onboarding committee to help new volunteers interface with a large stakeholder database

Indiana University

Bloomington, IN

Teaching Assistant

Jan 2021–May 2024

- Taught freshmen students computer science concepts and novel programming language paradigms
- Demonstrated concepts from lecture, assessed student expertise, and communicated weak points
- Ran a classroom of ~30 students, and provided individualized help to each

Indiana University

Bloomington, IN

Instructor

Jan 2023–May 2023

- Designed an entirely original curriculum on programming language type system implementation
- Provided biweekly lectures to graduate students and created auto-grading facilities for coursework
- Maintained comprehensive lecture notes for students to peruse
- Provided one-on-one help, with near-constant availability in student chat for questions

Highlighted Projects

Indiana University-Bloomington

Bloomington, IN

Graphite & Sawzall

Jan 2021–Dec 2022

- Created a R-inspired data visualization and wrangling domain-specific language in Racket
- Communicated technical talks at ICFP Scheme Workshop (2022, 2021) and RacketCon (2022, 2021)
- Wrote extensive documentation and tutorials, inspired by Kieran Healy's book *Data Visualization*

University of Pennsylvania

Philadelphia, PA

CN Testing

May 2023–Aug 2023

- Developed tooling to automatically generate property tests for imperative programs with pointer manipulation
- Formally verified all used algorithms for code generation in the Rocq proof assistant
- Collaborated with a group of graduate students and professors and orchestrated team events

University of Minnesota

Minneapolis, MN

Six Eyes

May 2022–Aug 2022

- Created an OpenGL-based visualization and structured editing tool in the Rust programming language
- Interfaced via socket with the cooltt proof assistant, updating the edit state and generating code in real time
- Collaborated remotely over GitHub and other live sharing platforms to facilitate development at scale

Education

Indiana University-Bloomington

May 2024

B.S. in Computer Science (Luddy School of Informatics and Computing)

GPA: 3.75

B.S. in Mathematics (College of Arts and Sciences)

Technical Skills

- Programming languages: **Java, Python, R, Racket**, C, Rust, SQL, C#, HTML, CSS, JavaScript, Go, Ruby
- IT: **data analysis, Linux, scripting, system administration**, nginx, Docker, SSL/TLS, Rails, Express.js
- Office: **Microsoft Excel, LaTeX, Autodesk Inventor**, Microsoft Word, Microsoft PowerPoint