

Nathan Paul

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EXPERIENCE

Research Intern @ [PES Innovation Lab](#) (formerly Microsoft Innovation Lab) June '25 – Jul '25

- Worked on **MiCoz**, a research project exploring [tuning methodologies](#) for microservices
- Used virtual speedup to identify key bottleneck services across nodes.
- Prototyped latency instrumentation on real and simulated DAGs to pinpoint true bottlenecks.
- Presented research findings & optimization strategies to a professional audience at the final [MiM](#) event.

Platform Engineering Intern @ [Golain.io](#). Remote, Pune Mar '25 – Apr '25

- Refactored the workflow/rule engine, migrating to a **DAG**-based approach for improved scalability
- Worked on rule logic and increased modularity across platform components

Developer, ACM Industrial Experience Program Feb '24 – Apr '24

- Part of the team that built **anna**, a static site generator written in Go.
- Achieved **284.5 ms** render time for a 1000-file [benchmark](#), outperforming Hugo and 11ty.
- Created a sitemap generator, set up RSS feeds, and an interactive tag-graph (D3.js).
- **DevOps**: Implemented CI/CD pipelines, a setup wizard, and theme bootstrapping.
- Presented at the [76th Go Bangalore meetup](#).

SKILLS

Languages: Go, Python, Bash, C, Nix, CSS, Redis, Postgres

Technologies: Git, Docker, GNU/Linux, Vim, Observability

Writing, Communication: Blogging, \LaTeX , Free Software Documentation, RFCs

INTERESTS

FOSS • Privacy • Protocols • GNU/Linux • Systems • IoT • Startups • Microservices

PROJECTS

- [anna](#): Lightning-fast static site generator written in Go.
- [py-typer](#): A speed typing test written in Python.
- [pasta](#): Minimal pastebin service written in Go.
- [jukebox](#): Queue LastFM music recommendations using **mpd**, **yt-dlp**, and Python.
- [lava](#): Node daemon that periodically saves bookmarked articles to your Obsidian vault.
- [wombat](#): Wikipedia crawler that visualizes relationships between articles.
- [bullet](#): Collates similar articles from various RSS feeds using cosine similarity.
- [drago](#): DAG-based workflow engine (PoC)

LINKS

- [Proof of Work](#): A reverse chronological record of my work.
- [Videos](#): YouTube channel focused on tech, privacy, and libre software.
- [Photos](#): Photos that I have shot and edited.
- [Ammachis Kathas](#): Malayalam short stories (an audiobook).
- [arceo](#): Blocklist against social media, news & consumerism.
- [wiki](#): My digital garden, a linkstash with web clippings.

EDUCATION

B.Tech in Computer Science & Engineering at PES University 2023 – 2027

ISFCR Dean's Award: Ranked 6th out of 250 participants in a jeopardy-style CTF.

Mentor Lead @HSP PESU June '25 – Present

- Leading the mentor team and coordinating club-wide initiatives
- In charge of **Tilde 4.0**, HSP's flagship summer-mentorship program
- Overseeing technical contributions and workshops for the '26 term

Technical Mentor @HSP PESU Oct '23 – May '25

- Maintainer of the club [website](#), powered by **anna**
- Mentored contributors to [psh](#), a POSIX-like shell
- Presented **jukebox** and **anna** at HSP Mentor Expo and Fireside Talks

Member @ACM PESU Sept '23 – Present

- Maintainer Lead for Hacknight 6.0
- Mentored contributors to [nimbus](#), a TUI client for Bluesky

Member @GDSC PESU Aug '23 – Sept '24

- Hosted [FOSS 101](#), an introductory workshop on open source
- Designer for Override, a Google Solutions Challenge hackathon