Arnav Jindal

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EDUCATION

- **Duke University**   Durham, NC
  Bachelor of Science - Computer Science,Economics and Journalism   *August 2022 - May 2026*

  Courses: *Data Structures and Algorithims, Databases, Discrete Math, Microeconomics, Macroeconomics, Multivariable Calculus, Linear Algebra*

SKILLS SUMMARY

- **Languages**: Python, Rust, Typescript, JavaScript, SQL, Bash, deno,MIPS
- **Libraries/Frameworks**: Next.js, Node.js, Hugo, React, Flask, FastApi, actix, express, postgreSQL, redis, mongo
- **Tools/Platforms**: Git, Jest, Webpack, Heroku, AWS, GCP, Docker, Kubernetes, cloudflare, vercel, grafana/prometheus,RPC,Langchain, Vector Stores

EXPERIENCE

- **TrendUp AI (YCOMB 2023)**   Remote
  Software Engineering Intern   *June 2023 - August 2023*
  - **Backend AI Engineering**: Worked with vector stores to scrape and add datasets for chatGPT querying
  - **Building Frontend**: create flows for users to create and post content powered by TrendUp's AI tools
  - **Data Pipelines**: Created Backend Pipelines with deployments to ingest and process data in the background in real-time

- **Duke University Department of Computer Science**   Durham,NC
  Summer Student Researcher (CS+)   *June 2023 - August 2023*
  - **Computer Systems Research**: Worked with Dr. Matthew Lentz and Dr. Danyang Zhuo to develop mRPC, a managed and more-efficient gRPC alternative
  - **Building Frontend**: Built python frontend using pyo3 and rust ffi to make it more easy to use. Also created documentation and examples.

- **Reachbest**   Remote
  Full Stack Development Intern   *Jun 2022 - August 2022*
  - **College Admissions Webapp**: Created dashboard for students using tyescript, nextjs and mongodb. Helped develop various features to visualise data intuitively
  - **DevOps**: Helped handle automated CI and deployment of webapp with testing and reviews

- **Znotes**   Remote
  Student Developer (Intern)   *Mar 2020 - August 2021*
  - **Python Community Moderation tool**: Purpose build software for moderation, role assignments, community metrics and website integration
  - **Web Development**: Designed react components with material-ui and reactjs

- **IBM**   Bangalore, India
  Intern   *Mar 2021 - Apr 2022*
  - **Created AI powered counselling service**: Used IBM technology to create a mental health support chatbot for the NGO Emancipaction to assist victims of human trafficking.
  - **Designed Website to deploy solution**: Website made using tailwind, html and vanilla js to embed counselling service. Performant website to load on weaker internet connections.

PROJECTS

- **Dagpi - full stack SaaS platform for image manipulation with monetization**: Full stack webapp featuring nextjs frontend and admin api backend in express with typescript. Features image manipulation microservice in python fastapi,and auth+metric microservices in actix rust. All networked together with docker and nginx and tracked with grafana, prometheus. Also features stripe and paypal payments. PostgreSQL and TimescaleDb databases with aws glacier automated backups. Integrates with stripe and paypal payment gateways for subscriptions.
- **Polaroid - image manipulation library in python**: Various rust libraries integrated to python with FFI. Features CI to build cross platform wheels using maturin. Core FFI done with pyo3 and features stubs and automatic documentation generation.
- **Dagbot - full-stack community engagement tool**: Built on discord's WS and HTTP apis, this tool responds to user interaction and uses several apis. Python engagement tool is connected to postgreSQL and frontend microservice by HTTP. Frontend microservice is express typescript with react frontend and mongodb database. Deployed with kubernetes
- **Esoteric Languages - niche programming languages**: Built 2 esoteric programming languages. Udymts features a rust based cli and compiler that turns udymts files into python to execute.. PokeType is a expression evluation language built with rply and features lexical analysis, tokenization, compilation, interpretation and more.
- **Image Uploader - full stack app to serve images** : Built with a rust backend, it allows users to upload images via HTTP, Form API or through a UX made of html, css and js templates rendered by rust backend. It also features user authentication, image compression and compiled binaries for various target operating systems.