

Kashyab Ambarani

[email](#) | [website](#) | [github](#) | [linkedin](#)

EDUCATION

Purdue University

Bachelor of Science - CS and Math (Actuarial Science minor)

Fort Wayne, IN

Aug 2018 – May 2022

Purdue University

Research Certificate in Math

Fort Wayne, IN

Augs 2021 – May 2022

EXPERIENCE

Software Engineer

TikTok

Jan 2024 – Present

San Jose, CA

- Support test infra & the TikTok TV team. Helped build and productionize a library for automated testing via llms and vision models, in use by various teams at TikTok. Helped ship *user feedback, account management, performance improvements, & navigation bar improvements* as part of TikTok TV.
- **languages:** python, go, & typescript; **libs/frameworks/models:** git-lfs, rush, scipy, grounding-dino, gpt4 (w/ vision), clip, llava-v1.6-mistral-7b, adb, react, & apache thrift

Software Engineer

Stryker

July 2022 – Dec 2023

Fort Wayne, IN

- Worked on the platform team (backend & infra) of the engage product. Helped ship *logging service, new adapter installation menu, enterprise wide mass notifications, certificate utility, alarm & audit throttling*, etc.
- **languages & db:** kotlin, ruby, python, bash, & postgres; **libs/frameworks:** git, rails, artemis, glassfish, & docker

Data Management Intern

Swiss Re

June 2021 – April 2022

Fort Wayne, IN

- Automated dataset collection, cleaning, and processing for 100 clients, and helped build an internal library for this focusing on ease of use and speed. **language:** python; **libs:** pandas, smtp, sftp

Research Assistant

Purdue University

Nov 2020 – Aug 2021

Fort Wayne, IN

- **Networking:** Worked on optimization algorithms for embedding virtual-network-functions (vnf) to substrate for radio-access-network (ran) slicing, entanglement based routing algorithms for quantum networks, fairness based scheduling algorithms for open ran (o-ran), and re-embedding vnfs after substrate failures.
- **ML/DL:** using gradient boosting to determine DELPHI model parameters for COVID-19 vaccine distribution, and training a neural net for ct-scan segmentation.

PROJECTS

seek | *electronjs, typescript, react, tailwind, shadcn*

- Spotlight search for linux which currently supports app search and execution. An electron app consisting of a custom desktop file parser running in the main process and the react frontend running in the renderer process.

habere | *typescript, nextjs, tailwind, shadcn, oslo, iron-session, openai, vercel*

- Auto-prioritizes your daily ticktick tasks using llms. Full stack app with frontend & backend built via nextjs and deployed through vercel. Launched on r/ticktick with overall positive reviews.

gator | *go, postgres, chi, pq, sqlc*

- Implemented an rss feed aggregator service which supports users, user api keys for auth, storage of rss feed info (along w/ follow support for users), posts associated with the feed, and a worker which fetches feed data every minute and populates the db with latest posts via the users followed rss feeds.

oak.viz | *c++, opengl, imgui, filebrowser, glew, freeglut, glm, objloader, stb, git*

- Visualization software providing users with a playground to interact and modify 3d objects using a simple ui.

- Implemented windowing system, file-browsing, object loading, texture mapping, lighting system, camera perspective shifting via toggle, and material property sub-menu.

ct-reduce | *python, napari, opencv, itk, sklearn, git*

- Implemented data cleaning of ct scans dataset, automated labelled dataset validation, liver segmentation of ct scans, 2d & 3d visualization of segmented liver, volume registration, and volume normalization.

idm corporate project | *python, r, bash, jupyter, sklearn, actuar, scipy, pandas*

- Helped develop a more accurate pricing algorithm for renters and condominium insurance for Central Insurance.
- Implemented pipeline for data cleaning, and cluster analysis (as part of feature selection and model development)

primitives | *c, python, git, beautifulsoup, tf-idf scoring*

- Barebones terminal based search consisting of a crawler, page indexer, and page ranking system using tf-idf scoring

PUBLICATIONS

Tu N. Nguyen, Kashyab J. Ambarani, and My T. Thai. Optimizing resource allocation and vnf embedding in ran slicing, 2022

Tu N. Nguyen, Kashyab J. Ambarani, Linh Le, Ivan Djordjevic, and Zhi-Li Zhang. A multiple-entanglement routing framework for quantum networks, 2022

Kashyab J. Ambarani, Shivansh Sharma, Shravan Komarabattini, My T. Thai, and Tu N. Nguyen. Enforcing resource allocation and vnf embedding in ran slicing. In *2021 IEEE Global Communications Conference (GLOBECOM)*, pages 1–6, 2021

RECOGNITION

Honors Pin, Medal, and Certificate Recipient May 2022

- Awarded by the honors center for completion of 18 credits worth of honors level courses.

NSF Student Travel Grant Oct 2021

- Received for proposal written to travel for the IEEE GLOBECOM 2021 conference held in Madrid, Spain.

Dean's and Semester Honors List Aug 2018 – May 2022

- Awarded for exemplary performance during the respective semester.

Maynard Mansfield Memorial Scholarship Aug 2021

- Awarded by the Department of Mathematical Sciences due to significant academic accomplishments.

National Cyber League (NCL) Silver Bracket Mar 2021

- Achieved silver bracket placement in the National Cyber League (NCL) team game.