

## Quinn Patwardhan

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## Education

Occidental College - August 2024-June 2028

Majors: Computer Science and Media Arts & Culture, Minor Urban & Environmental Policy

3.90 GPA, Dean's List

## Experience

### Occidental College Information Technology Services

#### *Helpdesk Technician*

**September 2025 - Present**

- Assist end-users with software and hardware problems in a timely and professional manner
- Investigate and troubleshoot issues and tickets in hardware and software
- Work with professors, staff, and students over the phone, email, and in person to address their unique issues

### Occidental College Department of History

#### *Research Assistant*

**September 2024 - December 2024**

- Grant-funded research (Oxy's Student Research Assistantship Program), develop tools to help historians digitize and visualize centuries-old maps and other archival data, using React + Redux, ThreeJS, Javascript, and Python

### Georgetown University Department of Computer Science InfoSense Artificial Intelligence Research Lab

#### *Research Intern*

**May 2023 - February 2024**

- Worked alongside PhD students to research and develop around Offline/Online Reinforcement Learning, Machine Learning, Information Retrieval, and Large Language Models
- Replicated Python-Based Reinforcement Learning Models using CUDA/PyTorch on GPU
- Attempted the National Institute of Standards and Technology's TREC iKAT Challenge using Python, Cuda, Transformers, Git, Multi-architecture Language Models, and Retrieval Methods
- Placed 2nd overall in 6 scoring categories, among 20+ submissions from eight institutions in three continents, Wrote paper and attended/presented at the international college-and-industry level Text Retrieval Conference at the National Institute of Standards and Technology
- Manipulated 300GB+ Datasets with Python/Linux/PyTorch on Supercomputers with terabytes of RAM

## Projects

### AmTrack ([App Store Link](#))

**May 2023 - Present**

- Built an IOS/Android Amtrak Train Tracking App in React Native with Rust Backend and Redis Cache Layer
- Handled 1000+ daily users, thousands of total downloads (30,000+), and over 50 5-star reviews
- Invited to Amtrak Headquarters and met with CEO, CIO, director of recruiting to discuss my work and improvements that can be made at Amtrak

### ngxay ([link](#))

**January 2024 - Present**

- Rust package with 30,000+ downloads for combing through NGINX logs at the speed of light (2mil lines/sec)
- Used Dynamic Programming, Hashmaps, Threading/Parallelization, and Ownership, and more optimizations

## Publications

Quinn Patwardhan and Grace Hui Yang. "Sequencing Matters: A Generate-Retrieve-Generate Model for Building Conversational Agents". In: *The Thirty-Second Text Retrieval Conference (TREC 2023)*. 2023.

<http://arxiv.org/abs/2311.09513>

## Technology Skills

ReactJS, Typescript, CSS, HTML, Git, HTTP, Node, Python, Java, NGINX, Linux, Ubuntu Server, MySQL, C Sharp, Swift/SwiftUI, PyTorch, React Native, Cuda, Mapbox GL JS API, Google Authentication, RESTful APIs, Docker, LaTeX, Language Models (Chat, BERT, T5), Rust, Redux, Axum

Blender, Adobe Illustrator, Adobe Photoshop, Adobe Lightroom, Adobe Indesign, Adobe Lightroom, Adobe Premiere Pro, Figma

Google Sheets/Microsoft Excel, Visual Studio Code, XCode, Neovim, Overleaf