

# Raymond Luo

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## EXPERIENCE

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### Culmination Bio

Aug. 2023 – Present

*Full Stack Software Engineer*

*Remote, NY*

- Delivered numerous core product features from 0 to 1, including scoping requirements, writing technical design documents, implementing **SQL**, **Python**, **TypeScript**, and **React** code, and presenting demos to stakeholders
- Designed and built backend architecture of flagship product using **Python** and **FastAPI**, scaling from a monolith to five microservices processing **millions of rows of data daily**
- Developed specialized data structure and API to efficiently filter and query massive datasets based on complex, multi-dimensional criteria
- Optimized backend functionality by parallelizing data processing workflows, **reducing processing time by 83%** and bringing speeds to **near real-time performance**
- Led org-wide engineering quality initiatives, introducing best practices, eliminating 10K+ lines of dead code, resolving months-old tech debt, and delivering tools that powered chatbot development and partner content ops
- Developed interactive data dashboards that automated feasibility studies, **reducing manual analysis time from days to a minute** and accelerating turnaround time with clients

### Spectrum Labs

Jan. 2023 – May 2023 / Jan. 2022 – May 2022

*Part-time Software Engineer Intern, Guardian Moderation Queue*

*Remote, NY*

- Implemented **e2e testing** with **Playwright**, saving minutes on manual testing, and integrated it into **CircleCI** for **CI/CD** with **TypeScript**, **Docker**
- Implemented role-based access control handled in **TypeScript** and **Vue** frontend and **Scala** backend with **gRPC**
- Improved internal efficiency and scalability by developing two features which **reduced turn-around-time by 98% (10 minutes → 10 seconds)**
- Implemented quality-of-life features which **saved users 10 minutes** per moderation session

### Meta (Facebook)

May 2022 – Aug. 2022 / June 2021 – Aug. 2021

*Software Engineer Intern, Dating Ranking ENG / Cloud Gaming Infra*

*New York, NY*

- Designed and implemented new candidate retrieval funnel for scalability, **reduced latency by 35%**, using **Hack**
- Created video-based analysis tool which **drove engagement up 10%** in third party developer's game, using **Hack**, **JavaScript**, and **React**
- Optimized clustering algorithm to avoid memory issues and **process 12x the volume of data**
- Experimented on computer vision script to **increase sample size of datasets by 20%**

### Social27 Inc.

May 2020 – Aug. 2020

*Data & AI Intern*

*Remote, WA*

- Implemented latent feature matrix factorization model to address sparsity in recommender system with **LightFM**
- Owned coordination between three companies to produce 3000+ attendee virtual event as PM+CSM

## EDUCATION

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### New York University

New York, NY

*BA in Computer Science & Media Studies, Minor in Mathematics; Magna Cum Laude (3.92)*

*Sep. 2019 – May 2023*

## PROJECTS

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### Doggle: A Wasm Game | Rust, Wasm, HTML, CSS, JavaScript

June 2022

- Created Wordle-style dog-themed browser game with images and dynamic word lengths

### Flower Shop: A Discord Ticketing Bot | Python

February 2022

- Created a Discord bot with friendly interface and UX for users to open tickets to speak with moderators
- Deployed bot to Heroku to run 24/7 for 5k+ member NYU Discord

## TECHNICAL SKILLS

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**Languages:** Python, SQL, Scala, Rust, Java, Hack/PHP, C

**Frameworks:** FastAPI, Flask, TensorFlow, Selenium, Nuxt

**Frontend:** HTML, CSS, JavaScript, TypeScript, React, Vue

**Developer Tools:** git, mercurial, bash, Docker, CircleCI, L<sup>A</sup>T<sub>E</sub>X