

Colin Graydon

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SUMMARY

Soon-to-be graduate in computer science and mathematics with real-world experience engineering back end systems and managing infrastructure. Demonstrated ability to design, implement, and optimize solutions at scale using modern system design principles.

EDUCATION

BA Computer Science, BSc Mathematics | Georgetown University | Minor in Economics | 4.00 in CS

Washington, DC

- Expected graduation December 2024 as First Honors student.

EXPERIENCE

Software Engineer | Ascend Meditations | Washington, DC | March 2024 - Present

- **Architected** and managed scalable back end systems using Google Cloud Platform's server-less functions with Firebase and RabbitMQ on a Kubernetes cluster, enabling auto-scaling of Azure text-to-speech endpoints to handle up to 2,500 concurrent text-to-speech requests.
- **Engineered and patented** NLP algorithm utilizing reinforcement learning, supervised, and unsupervised learning, resulting in a 12% increase in user content rating with large language models (LLMs), employing Python libraries NLTK and TensorFlow.
- **Built** an audio file conversion system for Expo using TypeScript, reducing audio load time by over 200 milliseconds.
- **Implemented** comprehensive paywall system for the Expo application, authored robust authentication logic, and deployed to App Store and Play Store.

Full Stack Developer, Intern | Amari Dating | Washington, DC | August 2023 - March 2024

- **Developed** an MVP for a dating app using Flutter, leading an agile team to deliver a highly functional and intuitive product.
- **Engineered** a user-matching algorithm using Python and Scikit-learn, enhancing match accuracy by 11% and improving user satisfaction.
- **Implemented** live chat and direct messaging features using Firebase's Realtime Database and Cloud Firestore, increasing user active minutes by 14%.

INVOLVEMENT

Chief Technical Officer | Georgetown University | Hoya Devs | May 2023 - Present

- **Founded** Georgetown University's software development club as CTO, leading the club's technical initiatives for 7 development teams.
- **Created** and taught 3 month course to mentor over 30 novice developers, focusing on modern web development essentials including JavaScript/TypeScript, HTML, CSS, and React/React Native, along with Firebase and Expo. Uploaded course to YouTube, receiving over 2500 views.
- **Taught** follow-up advanced course for 12 students, covering Express, JWT and cookie-based authentication, CORS, Docker, and REST APIs. Also explored system design principles, including DNS, load balancing, queues, distributed databases, and SQL vs NoSQL, along with an AWS crash course.

PROJECTS

Simplify Studying | simplifystudying.com | January 2022 - May 2022

- **Developed** a full-stack learning tool using TypeScript, microservices, and server-side rendering, with a back-end API using Express, Node.js, GraphQL, Postgres, and TypeORM, and front-end using React and Next.js, serving content to over 100 daily users.
- **Designed** and exposed a REST API using Node.js, integrating it with a GraphQL endpoint via Apollo Server, enhancing data retrieval flexibility and streamlining frontend-backend interactions and reducing render time by 22%. Implemented cookie-based authentication with Redis.
- **Deployed** application on AWS EC2 cluster via Docker, NGINX, and Kubernetes, with metric scraping via Prometheus and data visualization using Grafana.

SKILLS

Languages and Frameworks: TypeScript/Javascript, C++, Python, Java, Rust, React, Expo, Express, Flutter, GraphQL, SQL, HTML, CSS

Tools: Kubernetes, Docker, AWS, GCP, Firebase, Postgres, Prometheus, Grafana, NumPy, Pandas, TensorFlow, NLTK, Scikit-learn, Git, Github Actions, JUnit, Jest

CERTIFICATIONS

Certified Kubernetes Administrator (CKA) | Linux Foundation | 2023

AWS Solutions Architect Associate (SAA), Certified Cloud Practitioner (CLP) | Amazon | 2023

Prometheus Certified Associate (PCA) | Linux Foundation | 2023

FINRA Series 7, Series 66 | FINRA | 2022