Ashwin Ramachandran

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EXPERIENCE

APPIAN

Software Engineer II　　　　　　　　　　**Oct 2024 – Present**

- Leveraged **Python**, **SQL**, and **GitLab CI/CD** to create a pipeline to release software patches. Incorporated request submissions; departmental approvals; **real-time** patch status tracking; **automated build**, release, and **regression testing**; and **audit infrastructure**. **Reduced** patch **process time** by approximately **25%**.
- Utilized **Python**, **Terraform**, and **AWS** (**Lambda**, **CloudWatch Metrics/Alarms**, **SNS**) to implement an automated error reporting mechanism for **team-critical AWS Lambda** function failures. **Reduced** incident **response time by 23%**.
- Employed **Python**, **Bash**, and **Gitlab CI/CD** to **dynamically generate artifacts** in the hotfix documentation generation pipeline, completely eliminating manual toil and **reducing hotfix documentation generation time** by about **20%**.
- Optimized execution time of **team-critical AWS Lambda** function interacting with a **PostgreSQL database** by **offloading 60% of computations** to a user-defined function on the database server.
- Created, tested, and implemented **3 PyPI packages** for internal use, **hosted on a private GitLab instance**. Reduced code duplication in **5** different team repositories.

Software Engineer I　　　　　　　　　　**Jun 2023 – Oct 2024**

- Applied **Python**, **Bash**, **Terraform**, **AWS** (**Lambda**, **Cloudwatch**, **S3**, **IAM**, **Translate**), and **GitLab CI/CD** to architect and create the infrastructure that internationalizes the entire Appian platform. Achieved a **99% reduction** in translation **cost** and **time**, an **85% decrease** in **missing translations**, and maintained a **92% accuracy** compared to human translation services.
- Developed **4** ETL pipelines with **Python**, **Bash**, **SQL**, **Terraform**, and **AWS** (**Lambda**, **Cloudwatch**, **RDS**, **DynamoDB**, **IAM**, **S3**) to populate a **PostgreSQL** database daily, powering **Grafana** dashboards for visualizing software release metadata, test results, hotfix downloads, and i18n coverage.
- Designed and tested **7** internal **REST APIs** for use in **ETL and CI/CD pipelines**, using **Python** and **AWS** (**Lambda**, **Cloudwatch**, **DynamoDB**, **IAM**).
- Redesigned the software release pipeline to use the Builder design paradigm (in **Python**) in order to dynamically generate the YAML files for **GitLab CI/CD**, **reducing code duplication** by **15%** and improving modularity and maintainability.

PROJECTS

STREAMIXER: A MUSIC STREAMING & MIXING APP

Solo Developer　　　　　　　　　　**Dec 2024 – Present**

- Using **AWS**, **Terraform**, **Python**, and **SQL** to create a music streaming app that also allows users to create mixes and transitions with customizable track entry points, exit points, and crossfade durations.
- Plan to implement a beat-matching algorithm to auto-queue tracks.

EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN
M.S. in Computer Science
Jan 2024 - Dec 2026
GPA: 3.8 / 4.0

GEORGE MASON UNIVERSITY
B.S. in Computer Science
Aug 2019 - May 2023
GPA: 4.0 / 4.0

TECHNICAL SKILLS

LANGUAGES
5+ years: **Python**
4+ years: **SQL** • **Java** • **C**
1+ years: **Bash** • **C++** • **Go** • **Rust** • **JavaScript**

TOOLS & TECHNOLOGY
AWS (Lambda, Cloudwatch, S3, EC2, RDS, DynamoDB, SNS, SQS, EventBridge, IAM) • **Terraform** (IaC) • **Docker** • **Linux** • **Git** • **MySQL** • **PostgreSQL** • **NoSQL** (MongoDB, Elasticsearch, Firebase) • **OpenSearch** • **GitLab CI/CD** • **Grafana** • **Android Studio** • **GraphQL** • **CUDA**

PERSONAL INTERESTS

PROGRAMMING
My enthusiasm for programming comes from deep curiosity, creativity, and a keen attention to detail. I love tinkering to learn how things work. Devising and executing solutions to real-word problems is deeply rewarding for me.

DJ-ING
My passion for creativity also extends to music, where I love to explore how melodies connect. I began learning about audio and DJing software driven by the belief that a DJ should guide listeners on a unique musical journey. To make this possible, I am developing software that simplifies DJing, allowing anyone to create personalized, seamless mixes without complex tools.

BARBERING
Ever since I learned to cut my own hair, I have found barbering to be another way that I can express my creativity and attention to detail. In addition to myself, I give free haircuts to friends and those who may not be able to afford current barbershop prices. For me, barbering is not a business venture, but a fulfilling hobby and an additional form of artistic expression.