

Sean Bailey

(646) 344-2210 • Sean.Kuo.Work@gmail.com • Dallas TX • github.com/SeanBailey777 • www.linkedin.com/in/SeanBailey777

SUMMARY

- **5 years** of experience in **FinTech, e-commerce, distributed systems, microservices, telecommunications, & education**.
- **10 million** financial records utilized by **over 100** Business Analysts & Salespersons, delivered by ETL system I designed.
- **10x** efficiency and compliance with automated test coverage and deployments.
- **40%** reduction in voice recognition costs, saving \$144,000 annually.
- **40%** increase in new business opportunities through a RESTful ToIP Text Service.

TECHNICAL SKILLS

Programming Languages: C++, Python, Scala, Clojure, Java, Salesforce, Snowflake SQL, PostgreSQL, JSON, Shell, HTML

Tools & Frameworks: Linux, Git, Docker, RESTful API, Microservices, AWS, Azure, Google Cloud, NLP

EXPERIENCE

Capital One

Plano, TX

Senior Software Engineer

Feb. 2024 – Present

- Maintained and migrated existing ETL jobs to ensure near real-time and daily transfer of **10 million+** rows of data between **Salesforce, Snowflake**, and **Amazon S3**, using **Python, AWS Step Functions, Lambda, Glue**, and **EventBridge**.
- Designed and implemented a new **microservice** ETL system, increasing capability by **10x** to onboard and process multiple data sources, using **SOQL, SQL, Pandas DataFrame**, and **REST API**.
- Provided production support to resolve data anomalies for **100+** Business Analysts & Salespersons, using **Python, Pandas, PySpark DataFrame, CloudWatch, SOQL, SQL**, and **Splunk**.
- Implemented automated acceptance and functional tests for new features, using **Python Behave, Jenkins Pipeline**, and **Jira X-ray**, enabling continuous integration.
- Improved unit test coverage to **over 95%**, ensuring product compliance with enterprise standards and providing flexibility in test coverage requirements for new features, using Python.
- Developed **Infrastructure as Code (IaC)** to manage instances and resources for the **microservice** system, using **AWS CDK** and **CloudFormation**.
- Enhanced error handling and logging to reduce debugging and trace-back time, using **Python** and **AWS CloudWatch**.
- Automated AWS deployment in the development environment, achieving a **10x** improvement in deployment speed, using **Linux shell scripts**.
- Documented step-by-step procedures in Confluence to streamline knowledge transfer and reduce onboarding costs.

Novo Labs Inc

Dallas, TX

Software Engineer

Feb. 2021 – June 2023

- Enhanced efficiency and customer satisfaction for 25+ franchises and **5000+** locations with an automated voice-based service for **20,000+** restaurant orders daily. Utilized **Scala, Clojure, Quill (for SQL)**, and **Circe (for JSON)**. Deployed on **GCP**, integrated voice recognition, synthesis, and **NLP** services from Microsoft **Azure**.
- Reduced voice recognition costs by **40%**, potentially saving **\$144,000** annually, by developing a new **RESTful** audio stream client for Speech Recognition Service on Microsoft **Azure**, using **Scala**.
- Developed a **RESTful** ToIP Text Service channel, resulting in a **40%** increase in new business opportunities, using **Scala, Twitter Finagle, SQL**, and **Circe**.
- Achieved a 100% recovery rate of unanswered **RESTful API** calls by developing a Retryable Filter for **RESTful** calls within the SMS client, using **Scala** and **Twitter Finagle**.
- Prevented 75% of user call drops by implementing an order resuming capability feature, using **Scala, SQL**, and **JSON**.
- Reduced response time by 50% with **load balancers** for voice synthesis, using **Scala** and **Twitter Finagle**.
- Developed a hash string generator to efficiently map orders and services, enabling shortened URL payment applications, using **Scala** and **SQL**.
- Lowered **NLP** failures by 30%, improved various voice command handling, and enhanced exception handling using **Scala, unit tests, integration tests**, and **regression tests**, leveraging insights from error logs in **Datadog** and **Grafana**.
- Improved data retrieval accuracy by 30% for address parsing, using **Scala** and **Regex(Regular Expressions)**.
- Improved UI sections and implemented keyboard shortcuts for testing webpage UI, using **Clojure** and **HTML**. Achieved a 30% increase in testing efficiency.
- Managed **Kubernetes** cronjobs, and optimized loading efficiency by **10%** through **YAML** and **JSON**.

CodePro Edu.: **Software Engineer**

Dec. 2019 – Dec. 2020

NCTU Free5gc: **Back End Engineer**

Jul. 2019 – Nov. 2019

MoTC Taiwan: **Embedded System Engineer**

June 2016 – Sep. 2016

EDUCATION

B.S., Computer Science | National Chiao Tung University (NCTU)

Hsinchu, TW | **2018**