TYLER ALLEN

--**** | *******@gmail.com | github.com/tallen12

EDUCATION

Georgia Institute of Technology Atlanta,GA
Bachelor of Arts in Computer Science, Focus in AI and Devices Aug. 2013 – May 2016

EXPERIENCE

EvidentID Atlanta, GA
Junior Backend Software Engineer November 2016 – December 2017
- Developed the core backend service as one of the first four engineers at a fast-paced startup, implemented in Scala/Java using Akka and MongoDB and deployed on AWS; enabling cryptographically secure sharing of Personally Identifiable Information using a Public Key Infrastructure that is still core to the business today
- Implemented several Python data processing microservices that extracted additional data from third party sources by fetching data using web scraping and/or APIs; the fast development allowed the company to expand services quickly
- Managed Ansible playbooks for deployment of services to AWS and configuration of Nginx
- Performed code reviews on GitHub

Backend Software Engineer December 2017 – January 2021
- Led the development and maintenance of a key revenue driving service implemented in Python to fully automate background checks; specifically building data pipelines that fetch data from multiple REST and/or SOAP APIs, use NLP and machine learning to validate and extract data, and evaluate the data against a customer-provided profile to determine compliance and ensure legal requirements from the Fair Credit Reporting Act (FCRA) are met
- Built REST APIs in Flask to support third-party API key access and frontend OAuth flows, simplifying integration with internal and external systems
- Implemented comprehensive end-to-end automated testing with Pytest, Selenium, and Cucumber/Gherkin to implement Behavior Driven Testing enabling regression testing for new features
- Implemented internal communication via RabbitMQ, RPC, and REST APIs based on service and performance needs
- Configured Jenkins workflows for CI/CD to enable automatic running of tests, linting, and Docker builds for both Python and Scala services; ensuring high code quality and enabling automatic deployments to dev environments
- Configured infrastructure using Terraform to add OAuth to new services as needed
- Maintained a REST API in Elixir Phoenix with PostgreSQL to store customer profiles

Backend Software Engineer II January 2021 – April 2025
- Proposed and led the development of a new fine-tuned BERT machine learning model to replace the custom PyTorch CNN that was used to classify background check data; this resulted in a significant increase in accuracy leading to a 50% reduction in classifications that needed human review and a 90% reduction in human review time required overall
- Led the development of a Python REST API using Flask to centralize all notification and branding configuration in one PostgreSQL DB, providing a consistent API for accessing configuration data for both backend and frontend systems; implemented OAuth for frontend and API keys for backend
- Led the development of an authentication service for Emissary API Gateway in Azure Kubernetes Service (AKS) using Python and FastAPI; worked closely with frontend developers and DevOps to ensure OAuth-based access to backend services worked correctly through the API Gateway
- Implemented an event-driven architecture using RabbitMQ to handle notification workflows and trigger data processing, improving performance and system scalability
- Developed Insurance Document Verification Service implemented in Scala using Akka, Slick, and PostgreSQL with an international team using Agile and Scrum methods; specifically worked on an API to submit documents to AWS S3 and implemented several evaluation rules for determining compliance of insurance documents
- Configured and maintained Helm charts for deploying Python and Scala services to Azure Kubernetes Service; enabling scalable and reliable deployment to both development and production environments

SKILLS

Programming Languages: Python (10+ years), Scala/Java(9+ years), Elixir
Web Frameworks: FastAPI (Python), Flask (Python), Akka (Scala), Phoenix (Elixir)
Databases: PostgreSQL, MongoDB, Redis, Flyway, Alembic, SQLAlchemy, Slick(Scala), SQL
Communication Protocols: REST APIs, RPC, RabbitMQ
Testing: PyTest, Scalatest, Selenium, Cucumber, Behavior Driven Design (BDD)
Data Science & Machine Learning: numpy, SciPy, Pytorch, Hugging Face, BERT
Cloud & DevOps: Azure, AWS, S3, EC2, Kubernetes, Docker, Jenkins, Helm, Ansible, Nginx
Developer & Project Management Tools: Git, Github, Jira, Postman
Non Technical: Agile and Scrum, Working with PII, FCRA, Insurance, Risk Decisioning