Ganyu Xu

software engineer

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⌨ xuganyu96

in /in/ganyu-bruce-xu

Skills

- Rust
- Python 3
  pandas
  SQLAlchemy ORM
- Apache Airflow
- Amazon Web Services
  Compute (EC2, Lambda)
  Storage (S3, EBS)
  Container (ECS, Fargate)
  Database (MySQL, PostgreSQL)
  Analytics (Kinesis, Athena)
  Security (KMS, Secrets Manager)
  CI/CD (CodeDeploy, Beanstalk)
- Docker containers
- Shell scripting
- Web development
  Flask, Django
  HTM, CSS, JS, Bootstrap 5
  Static site generation (Jekyll)

Education

UC Berkeley

Aug, 2015 - May, 2019

B.A. Statistics

B.A. Mathematics

GPA: 3.464

Professional Experience

Senior software engineer, data platform   July, 2019 - Sept, 2023
LeanTaaS Inc.   Santa Clara, CA

- **Automated business analytics and legacy manual workflow** for operioperative management in 100+ healthcare systems throughout the US
- **Improved ETL pipeline scalability** by migrating data ingestion from PostgreSQL to AWS S3 and moving Airflow's workers to AWS ECS + Fargate
- **Accelerated enterprise customer onboarding** by automating labor-intensive tasks and cutting onboarding timeline from 4 months to 1 month
- **Increased developer productivity** by containerizing development environment, building unit testing framework, and integrating CI/CD practices
- **Reduced data-related production incidents and pipeline downtime** by implementing service availability monitoring and engineer on-call alarms via DataDog
- **Led a team of 7 software engineers** and mentored several junior developers through project design and implementation review and technical workshops

Open source contributions

RustCrypto   ⌨

- Implemented constant-time arithmetic for heap-allocated big integers in cryptographic bigint crate **crypto-bigint**
- Expanded prime generation for heap-allocated big integers in **crypto-primes**

Apache Airflow   ⌨

- (PR #32707) Fixed improper multiprocessing exception handling that causes Airflow scheduler to become zombie while the scheduler health checks become unresponsive
- (PR #32385) Fixed incorrect DagRun list view serialization that causes the webapp to crash when DagRun config is not JSON-serializable
- (PR #31836) Implemented user-specified retries for 'airflow db check'

rustls   ⌨

- (PR #1328) Identified Google's incorrect TLS termination procedure and fixed rustls' demo binaries to connect to other properly working TLS server

PyAthena   ⌨

- (PR #446) Fixed improper eager type hints evaluation that breaks compatibility between PyAthena and newer versions of SQLAlchemy

Asymmetric two columns (A2C)   ⌨

- **This resume you are reading** is built using A2C