

Tony Zhang

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Summary

Strong engineering professional experienced in **cloud software development, database management** with history of **leading software projects** in a biotechnology startup and FDA-regulated medical device company.

Skills

- C#/ASP.NET, Python, PostgreSQL, TimescaleDB, Redis, Kafka, TypeScript, JavaScript, Vue.JS, Bash, Test Driven Development, Agile project management
- **DevOps:** Git, Docker, AWS, Terraform, Linux, Fedora, Ubuntu, Windows, Grafana, Sentry, GitHub Workflow Actions, OpenVPN

Work Experience

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|----------------|---|
| 2022 - Present | Full-Stack Platform Engineer at Melonfrost (Brooklyn, NY) <ul style="list-style-type: none">■ Developed and maintained the real-time data streaming infrastructure between proprietary bioreactor hardware and machine learning algorithms.■ Increased performance of C# and Python services 100-fold through use of batch processing and application-level caching with Redis, allowing the company's first customer-oriented strain improvement experiments.■ Led the migration to TimescaleDB and set up effective database indexes, hypertables, and continuous data aggregation, ensuring robust sensor data visualization crucial for monitoring the status of experiments.■ Coached data scientists in unit testing techniques and created CI/CD GitHub Workflow Actions suite, enhancing software reliability in time-critical biological experiments.■ Established framework with domain-driven design in collaboration with the technical founder and data scientists for integrating machine learning models. |
| 2016 – 2022 | Software Development Engineer III at Philips Healthcare (Cambridge, MA) <ul style="list-style-type: none">■ Contributed to automation test framework infrastructure that enabled testing of different features of the ultrasound software. All infrastructure code was delivered with near 100% unit test coverage.■ Lead automation test efforts for Analysis, Connectivity/DICOM, and Backup & Restore.■ Collaborated with developers between Massachusetts, Washington state, and India.■ Designed MySQL relational database for ultrasound software requirement test results. Integrated stored procedures and views with test framework and ASP.NET dashboard.■ Implemented savings of 500+ hours in manual test effort per quarter. |
| 2015 | Software Engineer Co-op at Philips Healthcare (Highland Heights, OH) <ul style="list-style-type: none">■ Streamlined deliveries of software builds over the network using VBScript.■ Validated 100+ 3rd party software tools for critical FDA audit remediation. |
| 2014 | Software Verification Engineer Co-op at Philips Healthcare (Highland Heights, OH) <ul style="list-style-type: none">■ Designed FDA compliant software verification tests for diagnostic CT/AMI systems. |

Education

2011 – 2016 **Biomedical Engineering BSE and Computer Science minor**
College of Engineering, Case Western Reserve University