Chris Winters

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Turnitin (Pittsburgh, PA · https://www.turnitin.com/)

Director, Software Engineering (5/2018-Present)
Led organization-wide efforts to enable teams to be self-sufficient and independent, supporting microservice architecture and product team growth. Included: (1) managing a new distributed Application Operations team to improve application cycle times using CI/CD automation; (2) standardizing and improving automated testing, including load, browser, and API integration; (3) changing culture around testing through tooling, implementation, and advocacy. Also managed managers across multiple distributed teams, and acted as point person for Pittsburgh office ops (~40 people). Wore many other hats and filled in many additional gaps across the organization.

Senior Manager, Software Engineering (8/2016-5/2018)
Manager, Software Engineering (8/2015-8/2016)
Principal Software Engineer (10/2014–6/2015)
Led transition of automated essay scoring and feedback machine learning [system](#), and team supporting it, from small-scale pilots to national deployment in secondary schools. **Tripled size of engineering team** and helped build up team competencies in continuous deployment, monitoring, and agile development. Worked across many functions (bizdev, product management, UX) to scope, design, and build new features large and small. Helped create **Docker**-based infrastructure and underlying libraries for **Python microservices** running on AWS ECS (plus many other cloudy acronyms).

ModCloth (Pittsburgh, PA · https://www.modcloth.com/)

Senior Software Developer (1/2014–9/2014)
Led team to **redesign ecommerce checkout** process responsible for majority of $120m yearly revenue, creating a new API and extracting a new set of associated services from a legacy **Ruby on Rails** codebase. Made surgical improvements to **MySQL** schema and ORM use to improve performance and accommodate holiday traffic.

Summa Technologies (now CGI) (Pittsburgh, PA · https://www.cgi.com/en)

Senior Technical Consultant (12/2011–1/2014)
Project 2 (15 mo): Helped enable **8x growth** (15k ⇒ 120k daily students) over four months in rapidly growing [edtech system](#) by making many incremental design and performance improvements in application and database layers. Core system was **Ruby on Rails** deployed on Heroku. Assisted **moving from Heroku to AWS** using Scalr and performed extensive changes to database and domain to archive 80% of transactional data to handle at least 5x projected year-over-year growth.

Project 1 (9 mo): Lead developer for web-based audio/video Telemedicine platform in **Ruby on Rails** using **Redis** and **Faye** for near-realtime browser notifications and a custom library for rich **client-side JavaScript** data and model manipulations.

Vocollect Healthcare Systems (now Honeywell) (Pittsburgh, PA)

Software Architect (6/2006–12/2011)
Lead developer on AccuNurse, a voice-assisted point-of-care documentation system. Worked closely with clinical specialists to design and implement features requiring substantial **domain knowledge** such as analysis for alert conditions, auditing by state surveyors, and coding documentation into reimbursement reporting forms. Architecture based on **Java services in Spring** exposed through embedded Jetty, including a socket data interface, integration with third-party clinical software packages, and a reporting engine. Also represented company in **healthcare standards organizations** (IHE, HL7). Company grew over five years to 45 employees and $12m annual revenue.

Vocollect (now Honeywell) (Pittsburgh, PA · https://www.vocollect.com/)

Software Engineer, New Ventures (6/2005-6/2006)
Sole engineer on new markets team to find new markets for voice-operated wearable computing platform. Helped identify business needs and technical constraints for voice-directed work in several disparate industries, and built server and tooling to support rapid application development and prototype new ideas.

Software Test Engineer (9/2004–6/2005)
Leader in **testing automation**, developing (1) a high-level web and SOAP scenario testing framework, and (2) a tool to realistically emulate hundreds of concurrent wearable computers using scriptable Java components and high-level concurrency constructs. We **automated 75% of manual tests**, allowing for consistent testing across versions and quicker QA turnaround time for development releases.

(1992-2004 experience available on request)

Building blocks

- **Languages**: Python, SQL, JavaScript, Java, Ruby, bash, Go
- **Frameworks**: HTTP, REST, Flask, Locust, Django, Ruby on Rails, Java Servlets, Spring, Hibernate, node.js (Express), JEE with lots of acronyms
- **Development Infrastructure**: Git, GitHub, Vim, IntelliJ IDEA, Jenkins, NewRelic, Loggly, Sentry, Codeship, Bitbucket, JIRA, Slack, Swagger, Slate, Markdown, Wikis
- **Databases:** PostgreSQL, MySQL, Microsoft SQL Server, SQLite, H2/HSQLDB
- **Ops**: Docker, AWS (ECS, RDS, EC2, S3, SNS, SQS), Kubernetes, Linux, Terraform

Presentation highlights:
- 2019: "Feedback Loops Between Tooling and Culture", Pittsburgh Techfest (slides)
- 2017, "Why should I care about Docker?", Erie Day of Code (video)
- 2016, "Microservices: Moving stuff around", Pittsburgh Techfest (slides)
- 2013, "Database Sharding", with Carol Nichols, Pittsburgh Techfest

Education:
B.A., History at University of Pittsburgh (1992)