

Chris Winters

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10/2014–Present Principal Software Developer ... Director Software Engineering
Turnitin · Pittsburgh, PA · <http://www.turnitin.com/>

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, engineering) to scope, design, and build new features large and small. Led new distributed Application Operations (~SRE) team to improve cycle times for automated infrastructure creation and drive down deployment complexity to enable teams to be self-sufficient and independent. Helped create Docker-based infrastructure for Python microservices on **AWS ECS** and a slew of other acronyms.

1/2014–9/2014 Senior Software Developer
ModCloth · Pittsburgh, PA · <http://www.modcloth.com/>

Led team to redesign e-commerce 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.

12/2011–1/2014 Senior Technical Consultant
Summa Technologies · Pittsburgh, PA · <http://www.summa.com/>

Project 2 (15 mo): **Redesigned** core domain objects, **improved performance** at application and database layers, and collaborated on implementing **database sharding** on **Ruby on Rails** educational system deployed on Heroku, enabling 8x growth over four months (from 15k to 120k students/day). 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.

6/2005–12/2011 Software Architect
Vocollect Healthcare Systems · Pittsburgh, PA · <http://www.accunurse.com/>

Lead developer on 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 services in **Spring** exposed through an embedded **Jetty** web server, socket data interface, integration with third-party clinical software packages, and a reporting engine (**JasperReports**). Also represented company in **healthcare standards organizations** (IHE, HL7). Company grew over five years to 45 employees and \$12m annual revenue.

Role transitioned out of New Ventures group from sole engineer on business development team to find new markets for existing wearable computers. Helped specify business needs and technical constraints for voice-directed work in several disparate industries, and built server platform to support rapid application development.

9/2004–6/2005 Software Test Engineer

Voccollect · Pittsburgh, PA · <http://www.voccollect.com/>

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.

11/2000-9/2004 Senior Software Developer

Optiron · Pittsburgh, PA (<http://www.optiron.com/>, now defunct)

Developer leading company into web technology with projects like:

Payment Center: Greenfield **internationalized Spring webapp** for cashiers at satellite Mexico payment centers to take customer payments in a high-volume environment, including financial management interface.

Readi Online: Web-based portal for natural gas customers to browse account information, pay bills, and enter meter reads.

3/1998-11/2000 Senior Internet Developer (founding member)

intes.net · Silver Spring, MD (now: <http://www.digitalindustry.com/>)

Developed an open-source, object-oriented application server (**OpenInteract**) with robust data abstraction tools, developer-friendly API, and extensible architecture.

Implemented for clients a number of applications and sites running on the framework, both public and internal. Created many internal webapps and sysadmin tools.

- **Languages**: Python, SQL, Ruby, JavaScript, Java, Go, shell, Perl
 - **Frameworks**: HTTP, REST, Flask, Ruby on Rails, Django, node.js (Express), Java Servlets (Tomcat/Jetty), Spring, Hibernate, jQuery, Quartz, JEE with lots of acronyms
 - **Development Infrastructure**: Vim, IntelliJ IDEA, Git, GitHub, Bitbucket, Rake, Slack, Ant, JIRA, Markdown, Wikis
 - **Databases**: PostgreSQL, MySQL, Microsoft SQL Server, SQLite, H2/HSQLDB
 - **Operating Systems**: AWS, Linux, Mac OS X
- [pre-1998 experience available via conversation]

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](#))
- 2015, “Session-based Load Testing”, Pittsburgh Techfest ([slides](#))
- 2014, “Unretrofitable – Starting off Right”, Pittsburgh Techfest ([slides](#))
- 2013, “Database Sharding”, with Carol Nichols, Pittsburgh Techfest

Education:

B.A., History (minor in Computer Science), University of Pittsburgh, 1992