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## Work Experience

### Walmart GeC, Global Integrated Fulfillment

#### Software Engineer III (Automation)

2018.06 - Present AR

Developed a comprehensive automation solution based on Node.js and Appium and enabled automation on GIF products.

The data-driven solution efficiently handles hundreds of test orders per minute. A series of JavaScript kits streamline the access of microservices and allow full lifecycle control of orders. Reduced running time by managing orders, devices and API accesses through pipelines and parallelization.

Continuously improve and add features such as reusable test vehicle, test data DSL, async, CI/CD, cloud testing, performance recording, advanced reporting and BDD support. Learn from other Walmart teams and third-party solutions to reduce development cost. Enabled in-house alternative to minimize interruption upon issue with a key SaaS provider, and repurposed the SaaS solution as a candidate for BYOD testing.

Work with developers to improve testability and reliability. Onboard testers to automation. Finalize test plans & scopes within the cross-functional team. Provide guidance on test case writing and scripting. Support continuous learning and collaboration by allocating works, sharing demos, enforcing coding standards e.g. ESLint & Git workflow.

### Cornell University, Language Resource Center

#### Developer

2017.06 - 2018.05 NY

Built and maintained WALAT (WAL Authoring Tool), a courseware creator for Web Audio Lab, an online learning platform.

Before, rich media courses required Web development skills and manual compilation of texts, scripts and media. Usually Center staff acted as authors due to high demand from instructors.

WALAT was written in Angular to streamline the courseware creation process with sets of forms, page templates, drag-and-drop command editor and an asset manager for embedding media files. A desktop version was made with Node, SQLite and Electron without costing extra server resources.

### WalmartLabs

#### Tools and Automation Intern

2016.06 - 2016.08 CA

Developed SRT, a full-stack Java project visualizing test results.

SRT retrieves data from TestRail API and Jenkins DB, aggregates and stores them using Hibernate, and exposes RESTful endpoints with which the dashboard can visualize automation & test stats and drill down using filters. Optimized chart loading time by caching SQL query results. Created an admin UI to manage configs and scheduled tasks.

Sam's is still using SRT for test reporting and SRT was adapted for GIF backend E2E testing.

## Education

### Cornell University

Master's - Information Science - GPA: 3.26

2017.08 - 2018.05 NY

**Project** Microsoft Azure · A browser-based cluster configurator for Azure Service Fabric on-prem users

Led a team of 3 and worked closely with the client to visualize cluster hierarchy with D3.js and Matter.js the physics engine.

Support for drag-drop, WYSIWYG, two-way conversion between designer and JSON editor, and JSON Schema validation to notify users of missing or incorrect fields.

### Cornell University

Bachelor's - Computer Science, Information Science - GPA: 3.12

2013.08 - 2017.05 NY

**Honors** Fall 2014 Dean's List

**MATLAB Consultant**

2016.08 - 2017.05

**Student Assembly Tech Committee Developer**

2015.10 - 2016.06

## Highlights

Five years of Web development experience and two years of mobile testing experience. Proficient in JavaScript (Node.js), ES6+ features and common frameworks (Express, RN).

Working knowledge of Java development. Full stack project experience with Grails and Spring frameworks.

Experience with Linux environment (Shell), CI/CD, microservices, SQL, NoSQL, RESTful, WebSocket, MQ technologies.

Familiar with algorithms and data structures, past experiences with DBMS, operating systems, data analysis (Python).

Able to utilize PaaS & SaaS solutions and forge partnership with service providers. Excellent English proficiency.

**Languages** Mandarin Chinese, English

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## 工作经历

### Walmart GeC, Global Integrated Fulfillment

### 沃尔玛电商全球集成送配

#### 自动化测试工程师 III

2018.06 - 至今 阿肯色

提出并开发了基于开源框架的前端自动化测试解决方案，分析团队需求并加以定制，实现了GIF产品的跨平台移动端自动化测试的从无到有和快速上线。

将数据驱动与解决方案深度融合，使其能高效处理每分钟数以百计的测试订单。构建了一系列JavaScript套件，简化了对企业内微服务架构的访问，实现了数据采集、生成、查询、接收的端到端全流程把控。

通过对测试订单、测试设备、API访问的集中管理，管线化和并行处理，缩短了前端集成测试的耗时，以便在迭代周期内及时收集和报告软件缺陷，溯源，复测及验收。

对原有框架二次开发与整合优化，增添了测试用例模板化，测试数据DSL，异步命令，CI/CD，云测，性能记录，结果报送以及BDD测试支持等实用特性。

向公司其它团队以及第三方SaaS方案汲取经验，降低研发成本。在SaaS方案遇阻时果断采用自身与公司内部方案同时推进，确保自动化测试不中断。在BYOD项目落地后又逐步恢复与第三方的合作。

与开发者沟通，提高应用的可测性与可靠性。帮助测试者熟悉自动化测试，对测试计划、范围、环境予以确定，对测试用例和代码编写予以指导。通过任务细分，经验共享，ESLint规范，Git流程等方式支持团队建设和技术进步。

### Cornell University, Language Resource Center

### 康奈尔大学语言中心

#### 开发者

2017.06 - 2018.05 纽约

为Web Audio Lab（一个线上外语学习平台）编写和维护一个课件制作器（WALAT, WAL Authoring Tool）并创作课件。

在此之前，复杂的多媒体课件要求作者有网页开发的能力，并将课件内容，脚本和多媒体文件手动打包上传。通常中心雇员会充当作者，往往难以满足课程讲师们的需求。

WALAT提供了多种风格的表单、页面模板，可拖拽式指令编辑器及用于嵌入多媒体资源的管理器，大大简化了用户的创作流程。该Web应用运行于本地而不依赖服务器，并且为了便于分发，使用SQLite和Electron构建了一个桌面版本。

### WalmartLabs

### 沃尔玛实验室

#### 工具与自动化实习生

2016.06 - 2016.08 加州

开发了SRT，一个提供测试结果数据可视化图表的Java全栈项目。

SRT从TestRail API和Jenkins数据库调取数据，通过Hibernate和MySQL将数据持久化，最终以RESTful服务的形式供仪表盘使用。Web仪表盘可以实现对自动化和测试通过情况的概括性分析，并可通过测试集、时间等参数查找到具体的执行情况。

通过对SQL语句结果进行缓存，加快了图表的载入速度，并据此开发了后台界面来容纳不同的配置和计划任务。

首发用户山姆会员店仍然在使用SRT汇总测试结果，并且SRT经过容器化改造后被用于GIF后端的测试。

## 教育背景

### Cornell University

### 康奈尔大学

硕士 - 信息科学 - GPA: 3.26

2017.08 - 2018.05 纽约

**毕业设计** Microsoft Azure · 基于Web的面向本地部署Azure Service Fabric的用户的群集配置工具

带领三人团队和客户接洽，使用开源的D3.js和Matter.js物理引擎可视化呈现了群集的层次结构，支持拖拽和编辑视图元素，支持可视化设计器和JSON编辑器之间的互转。代码编辑器提供了基于JSON Schema的验证功能来提示用户缺失或错误的字段。

### Cornell University

### 康奈尔大学

学士 - 计算机科学，信息科学 双专业 - GPA: 3.12

2013.08 - 2017.05 纽约

**荣誉** Fall 2014 Dean's List (2014秋季院长奖)

**MATLAB 课程顾问**

2016.08 - 2017.05

**学生会技术部开发者**

2015.10 - 2016.06

## 技能其他

**语言能力** 汉语普通话, 英语

#### 专业技能

五年的Web项目开发经验和两年的移动端测试经验。熟练使用JavaScript (Node.js)，ES6+特性和常用框架 (Express, RN)。

熟悉Java后端开发，使用Grails框架实施过全栈项目，对Spring框架有一定了解。

熟悉Linux环境 (Shell)，CI/CD，微服务的布设。经常涉及SQL、NoSQL、RESTful、WebSocket、消息队列等技术。

了解常用的数据结构及算法，有DBMS、操作系统、数据分析 (Python) 等过往经验。

能够在项目中运用PaaS、SaaS等解决方案，和服务提供商保持良好合作。英语交流表达能力出众。