

JOSEPH JON BOOKER

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Education

- Doctor of Philosophy: Physics (Astrophysics Concentration)** July 2017
University of Toledo
- Master of Science: Computer Science (Theory Concentration)** June 2011
DePaul University Graduated With Distinction
- Dual B.S.: Mathematics and Computer Science; Physics** March 2010
DePaul University

Experience

Software Engineer June 2019–Present
Eversight, Inc (startup transforming pricing and promotions with AI and continuous experimentation)

- Implementing features enabling consumer packaged goods companies, including several **Fortune 100**, to optimize and track their promotions by using **Spring** applications integrating with third-party data sources using batch processing with **Quartz** and **Kubernetes Jobs**, **Google Pub/Sub**, and the **Facebook Marketing API**
- Designed and implemented a **REST API** for third-party integration partners
- Implemented operational improvements, including error reporting with **Sentry**, distributed caching with **Hazelcast**, and schema changes needed for performance improvements
- **Test-Driven Development** using modern tooling: code reviews with **Upsource**, sprint and issue management with **Jira**, CI/CD with **Jenkins** to **Google Kubernetes Engine**

Assistant Research Scientist (Full Stack Developer) August 2017–June 2019
Johns Hopkins University: The Institute of Data Intensive Engineering and Science

- Primary developer for the backend component responsible for resource access controls for our cloud computing platform for scientists (sciserver.org); created a test harness that uses **Docker Compose** and **SQL Server on Linux** for system testing; migrated to **Spring Boot**
- Investigated and implemented a file system-based quota system for external users with **XFS** project quotas
- Converted a **JSP** frontend into a reactive web site using **VueJS**; assisting in new features and bug-fixes
- Designed and implemented a web interface for external users to manage and submit their computational jobs
- Migrated production application database to being managed by **Flyway**; baselined other databases using **Liquibase** to prepare for database portability
- Created **Docker** images based on version-controlled Dockerfiles to replace manually created images; deployed a **Jenkins** CI server to build and run automated **Selenium**-based tests
- Deployed a prototype on-premise **Kubernetes** cluster and containerized existing applications
- Creation of a **Helm** chart to automate the installation and upgrades of all Linux components of our **Service-oriented architecture** system; working in international collaborations to enable installations of our stack on other clusters and **Azure**
- Assisting in many aspects of development for enabling science with **Big Data**: database design, feature implementation, deployment, configuration baselining, user-facing support

Graduate Research Assistant June 2012–July 2017
University of Toledo: Physics Department

- Focused on characterizing morphological features in Hubble Space Telescope near-IR images
- Created **Python** routines for scientific analysis and visualization
- Successfully received funding and telescope time through competitive NASA proposals

Selected Certifications and Continuing Education

Professional Scrum Master I (PSM I) March 2019
<https://www.scrum.org/user/476616>

Single Page Web Applications with **AngularJS** by Johns Hopkins University March 2019
<https://www.coursera.org/account/accomplishments/certificate/5E3WWCD5V5Q9>

Executive **Data Science** Specialization (5 Courses) by Johns Hopkins University February 2019
<https://www.coursera.org/account/accomplishments/certificate/MVGR799PCAA>

