

# J. Luke Scott

## Senior Software Developer

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## Skills

*Years of experience in parentheses*

**Code:** Java (17), Python (12), HTML/CSS/Javascript (15), AngularJS (3), JQuery (3), C/C++(3), PHP (5), Ruby (1)

**MVC:** Spring (7), Flask (0.5), Django (1), Cake (3)

**Data:** MongoDB (9), MySQL (6), PostgreSQL (2), Oracle (4)

**Mobile:** Android Java SDK (1)

**Misc:** Linux (16), Apache HTTP (8), Nginx (3), Git (9)

## Professional

### The Walt Disney Corporation

2016-Present

*Senior Java Developer, Foundational Technologies*

- Lead developer for a Tier-1 privileged access management application; currently leading architecture for AWS migration.
- Primary developer for a Tier-0 API gateway/datacenter traffic management system for Disney Parks and core services.
- Primary developer for an integration tool used for auditing system access changes during the Fox acquisition.
- Occasional contributor to Disney's OAuth2 implementation, used for internal, external and service authentication.

**Technologies:** Java, Spring, AWS, Flux/NIO, REST, Multithreading, MongoDB, SOA, JUnit/Mockito, Python

### Gates Archive (Rooster Park Consulting assignment)

2015-2016

*Architectural and technical consulting, Python/Java/Spring/AngularJS development*

- Created a web application to de-duplicate 1 million images using fuzzy hashing and fluid user interfaces. Required significant communication, vision and self-guidance to enable non-technical users to conquer a nebulous goal.
- Presented the de-duplication application at Northwest Archivists Conference in April 2016.
- Built a text extraction and topic analysis engine to summarize content in a 20TB collection. Recursively extracts arbitrary file formats until textual content can be examined and aggregates results at the text, file and corpus level.
- Assisted the media capture team by providing command line (Python) tools to enforce format/metadata consistency, plug-ins for Digital Transitions' Capture One scanning system, and general file synchronization and bit-level checks.
- Packaged four in-house applications using Vagrant and created a nightly build system to spin up sandbox environments.

**Technologies:** Java, Spring, Python, MongoDB, Active Directory, REST, AngularJS, Bootstrap, Jekyll, Vagrant

### Basque Center for Climate Change (long-term, part-time consulting)

2014-2016

*Architectural and technical consulting, Java/Spring/AngularJS development*

- Re-designed UI, project and service architecture and build and deployment systems for the k.LAB modeling platform.
- Re-implemented the k.LAB GIS data management and collaboration tool, which organizes, tags, and secures uploaded data. Vector data sets are indexed via PostGIS and all data is published to an internal GeoServer via REST API.
- Ongoing work incorporating and improving the agent modeling subsystem which I developed during my Master thesis.
- Technical and teaching assistant for the International Spring University in Bilbao, Spain every April.

**Technologies:** Java, Spring, Python, MongoDB, PostgreSQL/PostGIS, LDAP, REST, JUnit/Mockito, AngularJS, Bootstrap

### The Walt Disney Corporation (contract through Altasource Group)

2013-2015

*Senior Java Developer, Core Services*

- Wrote and maintained REST service and test code for Disney's core SOA serving mission critical requests at scale.
- Led multi-team investigations into outages and performance issues to address flaws in production code.
- Helped determine architectural direction and long-term strategies for refactoring, cleanliness and maintenance.

**Technologies:** Java, Spring, REST, SOA, JUnit/Mockito, Python

### Amazon.com

2010-2011

*Java/REST development on Amazon Prime SDET team*

- Developed and maintained Java test platform using HTMLUnit/Selenium, Ruby, Python, and proprietary SOA.
- Highly involved in code and architecture reviews; constantly balanced competing priorities and deadlines.

- Amazon Prime touches all business units; performance and scalability of test platform and code under test was essential.

**Technologies:** Java, REST, SOA, HTMLUnit/Selenium, Ruby, Python

## Decision Health

2007-2010

*Full-stack LAMP development, SOAP, DB and Linux admin*

- Completely rewrote internal CRM system
- Contributed the Temporal Data Extension to the open-source Doctrine ORM project.
- A small dev team meant exposure to the full SDLC and a high degree of ownership, flexibility, and problem solving.

**Technologies:** PHP, Cake MVC, Doctrine ORM, SOAP, MySQL, RHEL5 Linux administration

## CronWorks Software

2005-2007, 2010

*Custom software development for various clients*

- Provided technical analysis for SERVES toolkit at EarthEconomics; built a Django-based data management component.
- Advised T-Mobile Real Estate Acquisition group on architectural decisions and selection of a Java development team for the replacement of five internal systems.
- Managed development of FamilySnap social network.
- Developed Equity Spring real estate appraisal application.

**Technologies:** Java, MySQL, Python, Django MVC, PHP

## Cúram Software

2000-2005

*Java/J2EE and database development*

- Implementation of large-scale software projects in Human Services program management, including Social Security, Unemployment Insurance and Medicare/Medicaid.
- Complex subject matter and highly politicized project environments required execution under pressure and solid communication across cultural barriers.

**Technologies:** Java (J2EE with model-driven code generator), Rational Rose, Oracle 9i, MS SQL Server, ASP/HTML

## Education

### University of Luxembourg

2011-2013

*MSc, Computer Science*

- Theoretical Computer Science; Java, C, and Python development.
- **Thesis title:** *A method for coordinating unrelated space-time topologies in multi-agent, multi-scale simulations.* Project included building the agent subsystem for k.LAB in Java (See [cron.works/projects.html](http://cron.works/projects.html)).
- Advisors: Dr. Ferdinando Villa, BC3, Bilbao, Spain; Drs. Pascal Bouvry and Gregoire Danoy, University of Luxembourg.
- **Course Content:** Strong focus on CS fundamentals, mathematical theories, and logical proofs. Subjects included Intelligent Agents, Machine Learning, Theoretical Mathematics, Cryptography, Distributed Systems, and Communication and Networking Theory.
- Additional classes at University of Washington (Data Structures & Algorithms) and Seattle Pacific University (Operating Systems Programming, Discrete Mathematics).
- Ranked #2 out of 30 students.

**Technologies:** Java Core libraries, Android SDK, AspectJ, Neo4J, others; C CUDA GPU SDK, MPI parallel processing SDK; Python Sage mathematics library, matplotlib, Gnuplot.py

### University of Washington

1996-2000

*BA, Economics; also took courses in Computer Science, Physics, and Information Management.*

**Technologies:** C/C++, SQL, HTML

## Personal Projects

- **Automated Timelapse Capture:** Historical/archival project to capture footage of my neighborhood as it changes over the course of 10-20 years. Primary component is a mounted airtight case with a digital SLR, Raspberry Pi, WiFi, and temperature sensor. System also downloads full weather data for every picture taken and saves results in MongoDB.
- **Python-LaTeX Library:** Generate LaTeX markup from Python data and Jinja2 templates for character-perfect documents (LaTeX is a professional-grade typesetting program for microscopic pair kerning, character protrusion, alignment, etc.)
- **Personal Datacenter Automation:** Python libraries and Debian-based build/deploy system combining custom and standard code; all binaries and custom settings are deployed in a single step using Chef-style install profiles. This system integrates 3 physical sites consisting of 5 workstations and 6 servers, and can be fully rebuilt in about 2 hours.