# Colin Kirk

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#### **SKILLS**

**Programming Languages:** C/C++, Java, Groovy, Kotlin, Gosu, Python, Lisp, BASH, MATLAB, R, HTML,

CSS, JavaScript (Node.js, AngularJS)

Operating Systems: Windows, Linux (Server and desktop), OS X, Windows Server

**Databases:** SQL, Oracle, PostgreSQL, SQLite, MongoDB

**Technologies:** AWS, SVN, Git, LDAP, Ant, Maven, JMS, Tomcat, Apache, XenServer, Proxmox,

VMWare vSphere, Vyatta, Stripes, Swing, SWT, GWT

**Tools:** Eclipse, Netbeans, WebStorm, PyCharm, IntelliJ, Visual Studio, SQLDeveloper,

ROS/Gazebo, XML, JSON, Excel, XMLSpy, Slack, TeamCity, BitBucket, JIRA,

Swagger

**Certifications:** ScrumAlliance Certified ScrumMaster (CSM)

**Miscellaneous:** Mensa qualified (#100182479), inactive DOD security clearance

## **EXPERIENCE**

Changes, Inc., Oklahoma City, OK (December 2015 - Present)

Software Engineer

Key technologies: Java, Python, Shell Scripting, TeamCity, Git/Bitbucket, JIRA, Maven, Ant, Gradle
Design and implementation of Continuous Integration architecture and workflow from scratch using Atlassian
BitBucket Git, JetBrains TeamCity build server, JFrog Artifactory repository, and Gitflow workflow. Contribute to
Java codebase in response to user stories at all points from API to web UI.

- Created and modified a number of high-complexity SQL queries and database views for business reporting.
- Implemented TeamCity Enterprise build server with branch specific automatically triggered builds across 19 individual projects, storing built artifacts in Artifactory repository using semantic versioning
- Implemented integration points between JIRA, BitBucket, and TeamCity
- Implemented modified Gitflow branching strategy on Atlassian Bitbucket Git
- Heavily refactored very large and complex Ant build spanning 30+ individual build scripts and thousands of lines of Ant scripting to reduce build time from approximately two hours to approximately 10 minutes
- Began transitioning Maven projects to Gradle
- Built deploy tool in Python to automate deployment process of any project to any environment with webscraper in Python to handle automated retrieval of SNAPSHOT builds from Artifactory

#### **Compsource Mutual,** Oklahoma City, OK (February 2015 – December 2015)

Senior Java Developer, Integration team

Key technologies: Java, Groovy, Gosu, Stripes framework, JAXB, Oracle SQL, Ant, JIRA, Confluence, Git/Stash Stabilization and maintenance of integration endpoints between Guidewire insurance suite components for billing, claims, policies, and contact management, and integration with external systems, troubleshooting and improvement of system performance, creation and maintenance of large scale data handling processes, and development and maintenance of customer facing web portal.

- Developed fuzzy string matching algorithms to handle search issues when matching externally provided data
- Rebuilt and reduced run time of important nightly batch process by a factor of 10
- Greatly improved stability of multiple important processes

**CGI Federal,** Norman, OK (June 2014 – February 2015)

Software Systems Engineer, JADOCS

Key technologies: C, C++, Java, JBoss, Postgres, SMTP, SVN

Maintenance and development for both server (Java/C++) and client (C/C++) components of battlefield command and control (C2) and data deconfliction software suite used by all branches of US Military. Responsible for full software lifecycle including requirements analysis and development, architecture design, analysis and implementation, implementation of requirements, documentation, and testing.

- Rebuilt SMTP encoding, decoding, and processing to allow communication with various external systems
- Implemented new integration with several communications systems and protocols
- Tested new communications integration against live systems at offsite location
- Functioned as technical lead within 3 months of hire

## Northrop Grumman Aerospace Systems, Oklahoma City, OK (June 2013 – May 2014)

Engineer Software Quality

Key technologies: C, MS Access, Rational DOORS, Rational Rhapsody

Development, modification, application, and maintenance of standards for software quality operating methods, processes, systems and procedures. Performance of software inspection, testing, verification and validation to ensure that project and process control documentation were compliant with requirements, objectives and/or contract and meet acceptable reliability standards.

- Developed MS Access database to store and track blank and completed forms and documentation
- Performed, oversaw and verified unit, functional, and system testing on advanced aircraft simulation equipment at Tinker Air Force Base
- Oversaw offsite testing at a major subcontractor on multiple occasions

#### **MSCI,** Norman, OK (May 2010 – June 2013)

Core Services team, Environment support

Key technologies: Java, Groovy, Python, Lisp, BASH, Oracle SQL, JMS, Maven, SWT, Swing, SVN Setup, maintenance, and troubleshooting of workflows, frameworks, service deployments, workflow and server configuration, and other tasks related to Oracle Red Hat Linux-based SOA development environments. Development of tools, automated maintenance processes, and Eclipse plugins.

- Set up initial group of ~30 framework servers for HotSpot JVM-based distributed development sandbox environment
- Wrote a large number of long and complex BASH, Groovy, and Python scripts for server maintenance, environment cleanup, and server-to-server communication that were implemented in nightly or weekly use across multiple teams
- Wrote various tools in Java using Swing or SWT to assist in troubleshooting and data collection, as well as Eclipse plugins
- Contributed to a complex, object-oriented Python-based release automation tool
- Conducted cleanup and reorganization of code for core workflows written in Lisp and Gozer, a custom Lisp dialect

## **EDUCATION**

M.S. Computer Science, *University of Oklahoma*, January 2014 – January 2015 (incomplete) (GPA: 4.0)

Focus: AI and Machine Learning

**B.S.** Aerospace Engineering, University of Oklahoma, January 2009 – May 2013

Minor: Computer Science, focus on AI, Machine Learning, and Robotics

Capstone Project: Designed a low-boom 100 passenger supersonic transport (SST) with an assumed year of introduction of 2030 in cooperation with and under direction of Lockheed Martin. Primary responsibilities were aerodynamics calculations assisted by numerical methods and CAD modeling.

**B.A. Art, emphasis Art History**, Arkansas State University, August 1998 - December 2005

#### **ACTIVITIES**

**Product Owner, OU Computer Science Capstone** (Fall 2016): Product owner for senior Computer Science capstone project; project focus is analysis of patterns in vehicle parking behavior to enable smart planning and usage of space. **Graphic Designer, Looking Dynamic, LLC.** (Fall 2015): Created graphics for Android game "Looking Busy" by Looking Dynamic, LLC. (http://www.lookingdynamic.com) using GIMP and Blender3D.

**President - OU Student Martial Arts Association** (January 2010 – May 2013): Student group promoting knowledge of martial arts; responsible for organizing and teaching classes and self-defense seminars, updating website.