Derek Robati

Senior Software Engineer

Experience

Vocational

Jul 2018 – Present

Director of Apps and Services,
Dispersive Technologies, Inc., Alpharetta.

Detailed achievements:
- Introduced React and Go ecosystem that team developed and deployed.
- Developed a React/Redux web interface that featured:
    - Authorization with JWT tokens and session management with localStorage.
    - Presentation of 1000's of elements through searching, filtering, and sorting.
    - Used Redux-saga to concurrently handle actions.
    - Produced build files with webpack, while supporting a hot-reloaded developer version.
- Developed a feature that auto-provisioned objects as an easy of use feature, reducing complexity of setup.
- Maintained existing coffeescript and express REST api and web interface.
- Organized and lead key decisions for architecture and implementation.
- Documented and expanded knowledge base and onboarding material in wiki to share with team and other departments.
- Supported a team of 5 responsible for:
    - Developing applications written for macOS, Windows, iOS, and Android.
    - Developing and deploying a microservices for performance monitoring.

Jul 2016 – Jul 2018

Senior Software Engineer,
Dispersive Technologies, Inc., Alpharetta.

Detailed achievements:
- Developed an engineering dashboard in 2 weeks that featured:
    - Go REST API with authentication.
    - Retrieved the state of all user stories, issues, and test results from other tools REST APIs.
    - Calculated counts and stored them in database.
    - React app that fetched and displayed results.
    - Installed on TV and raspberrypi in breakroom.
- Developed Kafka infrastructure that was deployable in multiple docker containers, along with microservices written in Go.
    - docker-compose file would start a Kafka broker, zookeeper, schema-registry, REST interface, and Kafka connect.
    - Kafka connect used debezium jars to connect to mysql instances.
    - Kafka connect, producers, and consumers all supported Avro.
    - Developed microservices in Go that contained REST interfaces, producers, consumers, and MySQL connectors.

Senior Software Engineer - Continued,

Dispersive Technologies, Inc., Alpharetta.

Detailed achievements:
- Developed features and bug fixes for our web admin and REST interface.
  - Implemented in Node.js, express, jade, and coffeescript.
- Involved in UI/UX designs and architecture for the admin and REST interface.
- Developed tests for the REST interface.
  - Implemented in Node.js, coffeescript, MochaJS, ChaiJS, SinonJS.
- Maintained our Jenkins server and all build nodes for each OS.
- Proposed GitLabs CE, git workflow, and continuous delivery of builds.
- Deployed ESXi server with GitLabs CE instance, and runners for job execution.

Jan 2015 **R&D Engineer, Software Production**,

– Jul 2016 *ADVA Optical Networking North America, Inc.*, Norcross.

Detailed achievements:
- Joined as remote employee of team in Poland.
- Implemented Pythonic abstractions of APIs for Collabnet, Artifactory, Jenkins, and Git Repositories.
- Change Log Generator
  - Tool that dynamically produces subsets of commits linked to user stories.
  - Displayed a lot of metadata such as status of user stories, commit messages, program items.
  - Change Log Generator tool organized data in many formats such as Excel, HTMl, or PDF.
  - Could chose what subset of changes would be generated from the starting and ending builds.
- Internal Release Notes System
  - System to dynamically generate information describing build info, full change log from start to end of current release, and lists of defects in the release.
  - Deployed ReadTheDocs and Sphinx on AWS infrastructure to display generated data from the above APIs.
- Simulation Build Infrastructure
  - Administration and deployment of infrastructure.
  - Installed Ubuntu 16.04 LTS server images on bare metal.
  - Automatic provisioning of dependencies allowed a reproducible expansion of hardware.
  - Systems utilized vagrant to automate downloads of latest builds off artifactory, and load them on virtual servers.
- Artifactory Command Line Tool
  - Started creating python cli tool that allows developers to query meta-data from artifactory, and download desired builds.
  - Proposal started from gathering and documenting use cases from developers.
- Build Support
  - Supported engineers with build issues by reproducing issue, documenting, then finding root cause.
  - Worked with Polish team to find solutions to build issues.

Jan 2015 **R&D Engineer, Systems Integration Testing**,
– Dec 2015 *ADVA Optical Networking North America, Inc.*, Norcross.
Next Gen Platform:
- Automation Environment
  - Created reproducible environment for integration test suite development.
  - Used vagrant with a custom base image created with lubuntu and xfce GUI.
  - Bash used to provision; setting up python virtual environments & packages, robot framework & IDE, wxpython, vim, git.
  - Automated pulling of git repositories necessary for development and mounted them from host OS to guest OS.
  - This easy to setup environment helped developers join in contributing to the function testing needed. Ready to contribute in 30 minutes.
- Continuous Integration Workflow
  - Presented strategy based on git feature branch workflow to management and team. Proposal was well received, and adopted next day.
  - Created jobs to handle compilation of C++, installation of binaries on embedded platform, and execution of automated integration tests from feature branch.
  - This workflow substantially improved efficiency in the team, as defects would be caught before being released to master branch.
  - Setup and administered Jenkins server.
- Development of Automation Suites
  - Automated testing that covered positive and negative use cases.
  - Utilized SSH, Telnet, and REST libraries to trigger actions and validate output.
  - 200+ individual test cases provided good metrics to developers and management about what parts of the fault management system broke.
  - Data-driven test that took a generic configuration files and could test hundreds of combinations. Was designed to test defect correlation, raising defects and validating expected condition was raised. Very generic and reusable and is reused to test products.

Jun 2010 **R&D Engineer, Systems Integration Testing**,
– Dec 2014 *ADVA Optical Networking North America, Inc.*, Norcross.
Legacy Platform:
- Designed new python framework to be used in automation efforts.
  - Provided generalized solutions to handle a multitude of internal customer interfaces. Interfaces used through SSH, Telnet, and HTTP.
  - Worked on an international team from Germany, Norway, Poland, and US.
  - Travelled to discuss requirements in a week long summit as a respected and informed developer.
  - Designed many automated regressive and endurance tests.
  - Framework allowed automation to be written once and executed against each interface.
- Test Set Automation
  - Developed libraries to interface with Digital Lightwave and JDSU 2.5G, 10G test sets.
  - Interfaces used SCPI over Ethernet, and allowed automated injection of errors, and monitoring of UuT's transmit performance.
- Constructed test coverage from requirements for many products.
  - Tested 100G transponder, EDFA/RAMAN amplifiers, and N-degree ROADMs.
- Demonstrated product functionality to current and potential clients.

| Sep 2006 | **R&D Engineer, Test Engineer**, |
| – Jun 2010 | *ADVA Optical Networking North America, Inc.*, Norcross. |

Detailed achievements:
- Developed TestStand suites on test benches to examine limits of newly manufactured modules.
- Developed internal website to display Test Engineering projects to other departments.
  - Built on Django with custom ORM routing to external PostgreSQL database.
  - Test results from test benches stored into PostgreSQL database was then accessible through website.
  - Used latest HTML and CSS design patterns to generate asthetically pleasing website, that rendered correctly in all major browsers at that time.

| May 2006 | **Intern, Test Engineer**, |
| – Sep 2006 | *Movaz Networks, Inc.*, Norcross. |

Detailed achievements:
- Learned technologies used in the fiber optical telecommunications field.
  - Started with fundamentals of optics and how systems are configured.
  - Worked with equipment in core, access, and optical amplifiers.
  - Learned how telecom protocols worked such as OTN, SONET, SDH, and Ethernet.
- Documented test solutions designed by senior engineers.
- Extended wxPython application to support more features, like larger optical switch maps.

Miscellaneous

| Sep 2008 | **IT Administrator**, |
| – Feb 2009 | *The Monticello Corporation*, Atlanta. |

Supported a small office, with typical IT tasks.

Education

| Aug 2009 | **Bachelor of Science in Computer Science**, |
| – Dec 2011 | *Southern Polytechnic State University*, Marietta. |

Courses explored outside core degree classes include Digital Image Processing, OpenGL, and Distributed Computing.

Skills

Languages	Javascript, Golang, CoffeeScript, Python, Lisp, C++, C, Java, Perl, Ruby, PHP	Packages	React, Redux, Mux, Express, Django, PIL, Robot Framework, jQuery, d3.js, vagrant
Servers	Node.js, nginx, gunicorn, apache, twisted	Databases	PostgreSQL, MySQL, SQLite3, redis
Tools	vim, docker, emacs, bash, git	Web	HTML5, CSS3, bootstrap