

# PATRICK KALITA

Full stack software engineer with front end expertise

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http://www.patrickkalita.com

## SKILLS

**Front End** React, Redux, Webpack, Babel, Sass, CSS-in-JS, Bootstrap, D3, WebGL, Next.js, AngularJS, jQuery

**Back End** Node.js, Express, Java, Spring MVC, Hibernate, Python, FastAPI, PostgreSQL, Redis, Elasticsearch

**Workflow** Docker, Git, SVN, Agile, Jira, Jenkins

## WORK EXPERIENCE

### Axiom Data Science

Software Engineer

February 2021 - Present

Anchorage, AK (Remote)

Full stack web development for a variety of partner organization projects and internal data management services

- Led development of a Python and FastAPI-based service for managing and analyzing tabular datasets, stored as Apache Parquet files
- Built a set of tools for rapidly creating project landing websites based on Next.js, designed so the resulting sites are easily maintainable by non-programmers via Markdown files and YAML configuration
- Developed JSON Schema-backed, complex data entry form interface for collecting marine animal stranding information

### University of Oregon (Zebrafish Information Network)

Software Developer

June 2014 - February 2021

Eugene, OR

Full stack software development of zfin.org and alliancegenome.org

- Modernized zfin.org front-end software stack and build pipeline, migrating from a collection of jQuery plugins to Babel-compiled React components
- Led team of front-end developers for alliancegenome.org, setting technical direction, managing release deliverables, and communicating with senior leadership
- Redesigned and led implementation of new home page and critical data access pages for zfin.org

### TurboSquid

QA Developer

April 2013 - May 2014

New Orleans, LA

Developed automated web front-end and REST API tests in Java and Ruby for turbosquid.com and various internal projects

- Built a system for generating randomized 3D model and texture files, including a Python-based web interface
- Led training sessions to teach Ruby programming basics to members of QA manual testing team
- Initiated code review process within QA development group
- Maintained continuous integration and testing server and pool of test execution machines

## MathWorks

Quality Engineer

November 2009 - March 2013

Natick, MA

Developed automated tests for MATLAB graphics and data visualization functionality using an extensible, object-oriented, xUnit-compatible testing framework

- Worked with developers to design test cases and authored test procedure documents to capture testing strategies
- Led efforts to test graphics rendering performance and identify potential performance regressions
- Maintained and extended a suite of tests designed to automatically validate the visual correctness of rendered graphics and charts
- Developed a web-based, database-driven tool to track team member statuses and facilitate more efficient weekly meetings

## MathWorks

Application Support Engineer

June 2008 - November 2009

Natick, MA

Provided technical support to customers by creating examples and demonstrations, suggesting workarounds for bugs and limitations, and relaying enhancement requests to software developers

- Authored internal training materials on MATLAB graphics fundamentals, data visualization functions, and data exploration tools in MATLAB
- Delivered presentation on volume visualization techniques in MATLAB which was presented internally for the technical support department and externally on a company blog for users

## EDUCATION

### Purdue University

Master of Science in Electrical Engineering

August 2006 - May 2008

West Lafayette, IN

Concentration in Signal and Image Processing

### Rose-Hulman Institute of Technology

Bachelor of Science in Electrical Engineering

August 2002 - May 2006

Terre Haute, IN

Minor in Mathematics