

Joshua Cullen

Engineer with 6+ years of experience developing and testing web apps. Skilled in Python and JavaScript, with a passion for building testable, reliable systems.

@ hello@joshcullen.co joshcullen.co joshcull3n +1 (909) 735-9873 Los Angeles, CA

PERSONAL STRENGTHS

- **Over 6 years in software engineering** in both startup and enterprise scale environments, specializing in automation, frontend development, and internal tooling.
- **Strong expertise in React and JavaScript.** Focused on building scalable, testable, and high-performance UIs.
- **Extensive experience in architecting test automation** and observability systems using Cypress and Selenium.
- **Built software testing and observability processes** from the ground up in a fast-paced startup environment.
- **Designed CI/CD pipelines for frontend applications**, improving test reliability and build efficiency.

TECHNICAL SKILLS

Languages & Frameworks

- JavaScript, (React, Node.js)
- Python (Django)
- C# (NUnit)
- PostgreSQL, MongoDB

Tooling

- Bash, Selenium, Cypress, NUnit
- Grafana & Prometheus

DevOps

- Docker & Kubernetes
- GitLab CI/CD & Jenkins

EXPERIENCE

Software Engineer (SDET) - Head of Automation & QA

Gridspace | Los Angeles, California

📅 Dec 2021 - Present | *Full time*

- Built and led the full stack QA strategy and execution for an expansive voice AI product at a fast-paced startup serving Fortune 500 customers, establishing reliable testing infrastructure and team practices from the ground up.
- Built and maintained scalable testing frameworks for React applications using Cypress & Selenium, enabling rapid iteration and reliable deployments.
- Played a key role in frontend engineering by developing new UI features and optimizing existing React applications, proactively identifying and resolving bugs to enhance user experience and application performance.
- Managed GitLab CI/CD pipelines, optimizing build efficiency and deployment reliability for a 30-person engineering team.
- Implemented real-time observability tools (Grafana, Prometheus) for on-call monitoring and performance visibility.

Product Engineer - ArcGIS Online Hosted Services Team

Esri | Redlands, California

📅 Dec 2018 - Dec 2021 | *Full time*

- Developed automated tests for complex web-based geospatial applications using C#/NUnit (API testing), Selenium (frontend testing), and Gatling (Scale testing).
- Duties include: designing geographical workflows, writing automated UI and REST API tests, identifying and triaging bugs, communicating with the support team/customers, and writing effective documentation.
- Liaised between customers, support, and development teams to provide solutions and drive bug fixes.
- Develop automated UI tests in Java using Selenium WebDriver to facilitate the development of ArcGIS Online Hosted Notebooks and ensure healthy integration into the ArcGIS platform.
- Use Jenkins to regularly build test suites and send out reliable and communicative test reports.

Jr. GIS Specialist

VineView | Bedford, Nova Scotia

📅 June 2018 – Sept 2018 | *Contract*

- Worked on a small team to create vineyard health reports using imagery analysis methods with QGIS.
 - Automated data pipelines and visualization tools for large-scale vineyard analysis using JavaScript and Python.
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Fisheries Technician

Nova Scotia Salmon Association | Sheet Harbour, Nova Scotia

📅 Sept 2016 – Dec 2016 | *Co-op term*

- Supervised the aerial application of powdered limestone and fieldwork in environmental monitoring.
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Research Assistant

Agriculture and Agri-Food Canada | Kentville, Nova Scotia

📅 Sept 2015 – Dec 2015 | *Co-op term*

- Conducted lab research and data analysis on biological samples.
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EDUCATION

Advanced Diploma in GIS

Centre of Geographic Sciences (COGS) | 🎓 June 2018 | Lawrencetown, Nova Scotia

Bachelor of Science in Environmental Science (Computer Science Minor, Co-op Option)

Acadia University | 🎓 May 2017 | Wolfville, NS

PROJECTS

☰ **Stuff** - Personal productivity tool built with React | *October 2024*

- Built a full-stack React application with Express.js and MongoDB for tracking to-dos and habits. I designed it based on my personal productivity needs, favoring simplicity over rigid methodologies found in other to-do apps. It's purposefully unfussy and helps me keep my stuff together.
- Browse the GitHub repository here: <https://github.com/joshcull3n/stuff>

🚗 **Realtime GTFS Data Visualisation in a .NET desktop application** - NSCC Capstone project | *June 2018*

- For my end of year project at COGS, I decided to focus on processing and visualizing GTFS data, the universal geographic data format for public transit system schedules and live vehicle locations.
 - Using PL/pgSQL to process the static GTFS data and **GtfsRealtimeBindings**, ArcGIS Pro, QGIS, and the ArcGIS Runtime SDK for .NET to process the real-time GTFS data and build the application, I created a .NET desktop application that allows a user to visualise Halifax's and Vancouver's transit system, both retrospectively and in real-time.
 - Click here to see my presentation slides for this project - <https://bit.ly/3akbXJk>
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AWARDS & CERTIFICATIONS

🏆 **Dr. Roger F. Tomlinson Prize for Excellence in GIS Studies** | *April 2018*

- Awarded annually to an Advanced Diploma in Geographic Sciences graduate who possesses a passion for learning, who demonstrates superior work habits, and who has achieved above average academic standing in GIS related courses. (\$1000)