Contact

jbrown1.618@gmail.com

(860) 271–9092

Joshua A. Brown

More

github.com/jbrown1618

linkedin.com/in/jbrown1618

--- **Professional Experience** ---

GitHub—Azure DevOps
Software Engineer III   *2020–Present*

- Won first place in GitHub's internal 2020 Code-to-Cloud Hackathon in the Team Productivity category by building a chatbot for sharing interactions with live product telemetry
- Delivered new features to the Azure DevOps product
- Addressed time-sensitive live-site incidents and outages to support Microsoft's SLAs with its customers
- Trained a machine learning model to proactively identify slow-running dynamic SQL queries and predict which optimizations will best improve their performance

SAS Institute—Data Visualization R&D
Senior Associate Software Developer   *2017–2020*

- Built cutting-edge applications and libraries based on WebAssembly for the SAS Viya platform, using TypeScript, JavaScript, and C++
- Led the development of a framework for writing integration tests for the interface layer between JavaScript host code and a WebAssembly-based C++ runtime
- Delivered a new customer-facing application for creating data visualization templates, working on a team of two
- Designed a tool for encapsulating the team's complex karma configuration and distilling it into options specific to the development environment
- Drove inner-source practices by supporting the adoption of tools I designed by teams throughout the company

MetLife, Inc.
Software Development Engineer II   *2017*
Software Development Engineer I   *2016–2017*
Associate Software Development Engineer   *2014–2016*

- Developed an enterprise application used by underwriters to renew group benefits insurance products for over 10,000 companies per month
- Re-implemented the application-wide search, reducing end-to-end request time by a factor of 1000
- Led a team of software engineers in building a proof-of-concept for a "next-phase" application built on Spring Boot and Angular; consulted for teams using it as a prototype as it became adopted company-wide
- Pioneered MetLife's use of new technologies such as AngularJS and the Play Framework on an Agile team, taught AngularJS to senior software engineers new to the framework, and was the "go-to" subject matter expert
- Implemented a report automation system, replacing over a dozen manual reports per month

UNC Department of Physics
Supplemental Instruction Leader   *2013–2014*

- Planned and led three Supplemental Instruction sessions per week to teach physics students effective problem solving strategies
- Created a 100-page supplemental textbook to offer alternative explanations for complex topics
- Organized and facilitated group problem-solving sessions for introductory physics students

--- **Projects** ---

@josh-brown/vector

- Built a linear algebra package in TypeScript from the ground up; currently available on NPM
- Implemented matrix and vector operations, eigenvalue algorithms, matrix factorizations, and applications to statistics, calculus, and machine learning
- Achieved 100% test coverage for functions and 99.5% coverage for lines

Unicorn CLI

- Developed a command line interface for interacting with the division's distributed build system
- Replaced a manual process with a developer-friendly, automation-friendly workflow
- Application was adopted across Data Visualization R&D and attracted contributors from throughout the division

———————————— **Technical Skills** ————————————

Languages:	TypeScript / JavaScript, C#, Java, C++, Python, BASH, SQL, MatLab, LaTeX, HTML, CSS, Sass
Tools:	Git, Node.js, NPM, Grunt, Gulp, Maven, Webpack, Jenkins, Selenium
Libraries:	React, Angular, Spring, Hibernate, Pandas, NumPy, Scikit-learn, JUnit, Jest, Mocha, Chai
Concepts:	Object-Oriented Programming, Functional Programming, Machine Learning, Agile Development
Software:	GitHub, Azure DevOps, GitLab, VS Code, JetBrains IDEs (IntelliJ, CLion, etc.), Eclipse, Atlassian tools (BitBucket, JIRA, etc.)

———————————— **Education** ————————————

University of North Carolina at Chapel Hill *May 2014*

- Chancellor's Carolina Scholarship: full ride scholarship including tuition, room, and board for four years
- B.S. in Applied Mathematics with Highest Distinction; B.A. in Physics; Minor in Music
- UNC-Chapel Hill National Merit Scholarship
- Dean's List of Distinguished Students, Seven Semesters
- Phi Beta Kappa: National Academic Honor Society
- Sigma Pi Sigma: National Physics Honor Society
- GPA 3.8

———————————— **Extracurricular Activities** ————————————

Founder and Music Director, UNC Tarpeggios a cappella group *2010–2014*

- Established one of the most popular and selective a cappella groups at UNC
- Planned and led over 300 rehearsals, seven full-length concerts with hundreds of attendees, and dozens of other live performances
- Managed the production of a $10,000.00 professionally-produced studio album
- Wrote original constitution and bylaws, recruited and auditioned members, and established University recognition
- Arranged over 40 songs performed by the group