

Nathaniel Buechler

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Cross-disciplinary expert specializing in the areas of Product Design, User Experience, Graphic Design, and Front-end Engineering. Expertise with custom, bespoke, and user-centered engineering ranging from advanced prototyping to product development. Over a decade of experience, especially in modern frameworks such as React and Angular.

Languages: JavaScript/ES6+ (10 years), HTML5 (10 years), CSS3 (10 years), Python (7 years), Java (4 years)

Technologies:

JavaScript - React, flux, Redux, Angular (2-9), Web Components, RxJS, MEAN, express, node, Ionic, meteor, ember, moustache, handlebars, knockout, jQuery, jQuery UI, AJAX, jQuery Mobile, D3, Jasmine, Mocha, Jest, Karma, NPM, Bower, Babel, Grunt, Yeoman, Webpack

Python - Pandas, Jupyter Notebook, Scrapy, Flask, Django, Tornado, NLTK, SpaCy, SciPy, NumPy, Matplotlib, pip

Other - Android, Maven, Gradle, J2EE, Grails, JUnit, JSP, GSP, AWS (EC2, CodeDeploy, S3, Route 53, IAM, etc), Travis CI, Heroku, MongoDB, SQL Databases, Neo4j, Cucumber, Gherkin, XML, JSON, CSV, MVC, REST

Tools: Atom, Postman, Android Studio, Spring Tool Suite, Eclipse, Git, Subversion, Nginx, Tomcat, Apache, Ant, VirtualBox, Adobe Suite (Experience Design, Photoshop, Illustrator, InDesign, Dreamweaver)

Experience:

Owner, Alpha Nexus Technologies LLC, (December 2017 – Present)

- Established data science pipelines which process, analyze, and identify social patterns across thousands of websites
 - Processed each website with Scrapy, and parsed it with NLTK, stored intermediate DataFrames in the analysis pipelines with Pandas, and graphed results with Matplotlib
 - Captured social and affective data as JSON/CSV files and MongoDB records, and prototyped pipelines with Jupyter
- Lead user experience design activities and contributed to user interface engineering for clients' products and efforts
 - Focused on user-centered design with empathy maps, user personas, journey maps, user stories, etc., and contributed UI/UX expertise to modern enterprise and government level background investigation software
 - Built advanced user interfaces from concept to product while making use of Adobe tools (XD, Photoshop, etc.) and modern JavaScript (Angular, React)
 - Cooperated with various teams and acted as a technical representative for the client in tech proposal bids
- Engineered and architected a microservice application, called Affect Nexus, which includes programming languages and paradigms traversing the full stack of a software application
 - Developed an Android mobile application, created a JavaScript front-end React/Redux application, engineered two JavaScript middleware applications for authentication/verification with JWT tokens, and structured the Python3 business logic for data management with MongoDB
 - Managed AWS EC2, Route 53, IAM, and CodeDeploy configurations to deploy and integrate the microservices with Travis CI and GitHub and configured EC2 instances with Bash scripts, Nginx, and HTTPS encryption using "Let's Encrypt"

Senior Software Systems Engineer, Rivera Group, (February 2020– Present)

- Upgraded and transformed tightly-coupled legacy JSP/AngularJS views into its modern Angular 9 equivalent as part of a major transition to a service-oriented architecture (departing from a monolithic pattern)
- Improved code reusability with Web Components and the Shadow DOM through the implementation of the 'ViewEncapsulation' standard in the Angular ecosystem
- Handled shared state between components with RxJS Observables and specifically with the 'BehaviorSubject' module
- Rendered intuitive interfaces through the use of Material Design best practices and generated dynamic data visualizations with D3.js (version 5)

Senior Full Stack Developer, TISTA Science & Technology Corporation, (September 2019 – November 2019)

- Engineered 'green-field' software applications and communicated advanced software architecture patterns while documenting state-of-the-art concepts
- Lead the development efforts on several concurrent application development initiatives and collaborated within small agile teams

UI Developer (Contractor), Insight Global, (January 2019 – June 2019)

- Developed Angular 6 form-based user interfaces for configuring networks.
- Cooperated on an international team working across multiple time zones and participated in regular SCRUM ceremonies taking place as 3 week cycles.
- Contributed work remotely as a sub-contractor for Cisco and Bank of America (their central location was located in New York, NY).

Research Engineer, Two Six Labs (formerly Invoicea Labs), (March 2017 – December 2017)

- Realigned user interfaces with modern design implementations, separated monolithic code into separate and smaller services, and reorganized research project development efforts into production-ready software
- Actualized concepts into software components while following software development life cycle best practices
 - Conceived features and design concepts, constructed high fidelity designs, and integrated user experience research
 - Contributed to software architecture discussions, documented API contracts, and ideated on software prototypes
 - Engineered multiple features including sequence matching algorithms in Python, file system user interfaces in angular.js, and system diagnostic tools across the application stack
- Researched IETF RFC specifications for information about Internet protocols, guided a small team of interns, and learned basic knowledge of Docker, machine learning, and programming language theory
- Improved branding materials, designed detailed style guides, explored user experience concepts, and tested user interface layouts with the Adobe Suite

Senior UX Engineer, Novetta, (October 2016 – March 2017)

- Enhanced the user experience engineering of Novetta's advanced analytics in the domains of cyber, mission, and entity-centric data via advanced user interfaces, prototypes, and complex data visualizations
- Collaborated with over five teams in Novetta's Product and Technology division to implement both optimized workflows and product design specifications
- Conducted user interviews and generated a 15-page user experience report emphasizing the major areas of improvement for Novetta's cyber product (NCA)

UI Software Developer, Novetta, (July 2015 – October 2016)

- Lead user interface maintenance and improvement efforts related to the cyber analytic product which include enhanced user experiences, code quality improvements, and the addition of modern tech like react.js, Babel, and ES6
- Extended core functionality of the cyber analytic product with additional JavaScript microservices built with Webpack

JavaScript UI Engineer, DrFirst, Inc., (January 2015 – July 2015)

- Steered the development of several modern (Web 2.0) and responsive angular.js applications while detecting mobile (iOS and Android, specifically) clients by implementing Yeoman, Ionic, NPM, Bower, and other technologies
- Performed routine maintenance and enhancements of the administrative application (ember.js) which includes improvements to the UI/UX of secure HIPAA compliant messaging, auditing, and archiving

Java Developer, InfoZen, Inc., (April 2014 – October 2014)

- Generated complex data visualizations with front-end JavaScript technologies such as D3.js, jQuery, jQuery UI, and angular.js
- Conceived dynamic dashboards, responsive design patterns, aesthetically pleasing layouts, clear user interfaces, and friendly user experiences which display insightful business analysis and reporting from the usage of Java, Mongo, Groovy, Grails, Hibernate, HTML5, CSS3, Bootstrap, and JavaScript

Senior UI/UX Developer, Artech Government Services, LLC., (August 2013 – April 2014)

- Implemented agile techniques on 7-person team practicing SCRUM with test-driven software development (TDD)
- Designed and developed frameworks and a modular user interface design while leveraging front-end web technologies including Java, Groovy, Grails, JavaScript, HTML/CSS as a sub-contractor for InfoZen in Bethesda, MD

Education:

- Bachelor of Arts: Visual Arts – Graphic Design, University of Maryland: Baltimore County (UMBC), GPA 3.2
- Bachelor of Arts: Political Science, UMBC, GPA 3.2