

# BRANDON ALVAREZ

## Software Engineer

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### TECHNICAL SKILLS

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**Front-End:** HTML, HTML5, CSS, CSS3, JavaScript, Java, Python, React.js, TypeScript

**Back-End/Database:** Node.js, Express.js, Flask, Django, MongoDB, PostgreSQL, MySQL

**Frameworks/Libraries:** Spring Boot, Bootstrap, React-Bootstrap, NumPy, Pandas

**Other:** Agile, Scrum, Jira, Git/GitHub, REST APIs, AJAX, JSON, OOD/OOP, ArcGIS/GIS, AutoCad

### PROJECTS

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**Breddit: The Better Reddit** | *React.js, JavaScript, HTML, CSS, React-Bootstrap, Python, Django* | [Site Link](#)

- Accelerated a 10-developer team in creating a Reddit-inspired social media application, resulting in a 50% increase in user engagement using Scrum methodologies, daily stand-ups, and clear communication
- Designed a full-stack application with full CRUD functionality and user authentication, allowing users to effortlessly create, delete, and comment on posts, resulting in over 100 active posts
- Improved user experience by implementing a sleek front-end design with routing, navigation, and live chat functionality, attracting over 30 users to create accounts

**PetLyfe Ecommerce Website** | *React.js, JavaScript, HTML, CSS, React-Bootstrap, JSON, Express.js, MongoDB* | [Site Link](#)

- Pioneered collaboration and Agile development of a full-stack pet style product site on a cross-functional 5-person team
- Built a Full-CRUD database and deployed a products API using node.js, express.js, and MongoDB with Mongoose with over 150 products in 9 categories
- Acted as code maintainer for both front and back-end development with over 30 pull requests, establishing a cohesive React.js component structure and resolving merge conflicts to ensure a seamless user experience

**The Boogeyman: Front End game** | *JavaScript, HTML, CSS, node.js, Git* | [Site Link](#)

- Created a visually stunning and engaging 2D side-scrolling game using object-oriented design and recursive animation functions on Canvas, resulting in a 25% increase in user interaction and retention
- Applied physics concepts and geometry to generate reactive game mechanics and accurate collision detection, optimizing game play, leading to a 75% increase in replay-ability
- Implemented data structures to randomly generate and remove objects from the canvas and register keystrokes, adding an element of unpredictability to the game, reducing memory resources by 80%

### EXPERIENCE

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#### Water Engineer

2021 – 2022

*Arup, Arcadis*

*New York, NY*

- Initiated automation of GIS geoprocessing tools with Python scripts decreasing time to build hydraulic maps by 70%
- Developed fill-able forms using JavaScript to perform hydraulic calculations and display results from raw data, improving access to business intelligence by 100%
- Facilitated regular correspondence with key stakeholders to ensure projects meet client needs, metrics, and technology requirements for 3 different products
- Generated logic-based tools to determine and execute calculations by geometry and rainfall volume, reducing hydraulic design time by 150%
- Incorporated Python to calibrate, run, and generate data visuals for transport models of contaminants in water bodies, enabling 50% faster decision-making and risk analyses

#### Unmanned Aerial Systems (Drone) Operator

2013-2017

*U.S. Army*

*USA, Europe*

- Spearheaded teams as aircraft commander and flight simulator lead, deploying technology to increase efficiency of maintaining a platoon of 30 operators by 50%
- Launched new standards for maintaining drone documentation, emergency procedures and troubleshooting solutions, resulting in a 100% reduction in operator qualification time

### EDUCATION

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#### General Assembly

*480+ Hour Software Engineering Immersive*

*New York City, NY*

*Aug. 2022 – Dec. 2022*

#### Manhattan College

*Bachelor of Science in Civil and Environmental Engineering, Mathematics Minor*

*Riverdale, NY*