Cameron Beck

Software Engineer
Bachelor of Science
University of Connecticut

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LinkedIn
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Skills

- **Programming Languages**: Python, JavaScript, SQL, HTML / CSS, Bash
- **Libraries & Frameworks**: React, Redux, Express, Sequelize, Flask, SQLAlchemy, Selenium, Pytest, Mocha
- **Other Professional Skills**: Agile (Kanban, Scrum), AWS, Docker, Git, Linux, Object-Oriented Programming (OOP), PostgreSQL, Postman, REST APIs, Redis, Test-Driven Development (TDD), WebSockets

Projects

- **Full-stack Web Application: Smack** ***Site***
  A live messaging app heavily inspired by Slack (AWS S3, Docker, Flask, PostgreSQL, React, Redis, Redux, SQLAlchemy, Socket.IO) GitHub
  - Utilized WebSockets and Redis to facilitate high performance real-time, bidirectional communication between users, employing graceful disconnection and idle timeout strategies for connection management to ensure scalability
  - Led a team of four and successfully drove the completion of the project within a week by establishing clear project goals with a Kanban board and conducting daily stand-up meetings to track progress and address any impediments
  - Leveraged one-way data binding in React to create an interactive buffer for users to visualize and modify their attachment queue, allowing for the easy uploading, downloading, and removing of attachments
  - Integrated AWS S3 storage services, enhancing file and media management capabilities within message attachments while reducing server load and increasing performance

- **Full-stack Web Application: Seddit** ***Site***
  The front page of the Internet (AWS S3, Docker, Flask, PostgreSQL, React, Redux, and SQLAlchemy) GitHub
  - Built an efficient, performant backend using Flask & SQLAlchemy to serve a scalable RESTful API. Used Faker extensively for synthetic data generation, permitting comprehensive testing and simulation
  - Created a responsive and device-agnostic UI with React, emphasizing mobile-friendliness, modular design, and component reusability. Ensured consistent application behavior and optimized data flow using Redux for state management
  - Effectively tackled hierarchical comment challenges using the adjacency list pattern in PostgreSQL. Seamlessly integrated this backend solution with the React/Redux frontend, delivering users an intuitive thread navigation experience

- **Full-stack Web Application: Meetup** ***Site***
  A platform where interests become friendships (Docker, Express, JWT, NodeJS, PostgreSQL, React, Redux, and Sequelize) GitHub
  - Designed a relational database schema in PostgreSQL; created tables, relationships, and constraints to streamline data storage and retrieval using the Node.js object-relational mapping tool (ORM) Sequelize
  - Improved application stability by using Postman with Mocha and Chai for comprehensive API and unit testing, as well as Selenium for E2E testing. Established and containerized a robust and automated testing suite, making testing less error prone and more rigorous
  - Incorporated JSON Web Tokens (JWT) with Express.js for user authorization, ensuring secure access and user session management

Experience

- **University of Connecticut - Department of Physiology and Neurobiology** *Jul 2021 - Aug 2022*
  Computational Research Assistant Storrs, CT, USA
  - Developed an ETL-style computational pipeline, primarily using Python, for the systematic extraction, transformation, and visualization of large-scale single-cell RNA-seq datasets, evaluating differential expression and pseudotime cell trajectories
  - Applied statistical and machine learning techniques - such as k-nearest neighbors, principal component analysis, and t-distributed stochastic neighbor embedding - to classify unlabeled cells as cancerous or non-cancerous

- **University of Connecticut Health Center - Center for Vascular Biology** *Jun 2015 - Aug 2018*
  Research Assistant Farmington, CT, USA
  - Investigated the biochemistry and cell biology of sphingosine-1-phosphate modulators in renal fibrosis and renal cell carcinoma, yielding new insights into FTY720's mechanism of action and revealing other potential therapeutic targets

Education

- **App Academy** *Nov 2022 - May 2023*
  Full-stack Development Remote, USA

- **University of Connecticut** *Aug 2016 - May 2021*
  Bachelor's of Science in Molecular and Cell Biology Storrs, CT, USA