



Cameron Beck

Bachelor of Science
in Molecular and Cell Biology
University of Connecticut

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LinkedIn

Github

TECHNICAL SKILLS

- **Programming Languages:** Python, JavaScript, Bash, SQL, HTML / CSS
- **Libraries & Frameworks:** React, Redux, Express, Sequelize, Node.js, Socket.IO, Flask, SQLAlchemy, NumPy, Matplotlib, Pandas, Selenium, Pytest, Jest, Mocha, Chai
- **Other:** Test-Driven Development (TDD), Version Control Systems (VCS) - Git, Object-Oriented Programming (OOP), Pair Programming, Scrum, Agile Workflow, AWS S3, WebSockets, REST APIs, Postman

PROJECTS

• Full-stack Web Application: Seddit

Live Site

A Reddit clone complete with subreddits, posts, comments, and voting. (AWS S3, React, Redux, Flask, and SQLAlchemy)

Github

- Built a backend using Flask & SQLAlchemy to create an efficient, consistent, RESTful API, taking extensive advantage of Faker for synthetic data generation.
- Crafted a modern, intuitive user interface with a highly responsive design, with device-agnosticism and mobile-friendliness in mind.
- Produced modular, extensible React components, allowing for the easy refactoring, upgrading, and composition of parts.

• Full-stack Web Application: Smack

Live Site

A live messaging app for your organization, inspired by Slack. (AWS S3, Flask, Socket.IO, SQLAlchemy, React, and Redux)

Github

- Managed a team of four members and successfully drove the completion of the project within a week by establishing clear project goals and conducting daily stand-up meetings to monitor progress and address any impediments.
- Implemented WebSockets to facilitate real-time, bidirectional communication between users, dramatically improving user engagement.
- Integrated AWS S3 storage services, enhancing file and media management capabilities within message attachments while reducing server load and increasing performance.
- Employed Git for version control and source code management, enabling team members to work on the same codebase simultaneously while ensuring code integrity and traceability.

• Full-stack Web Application: Meetup

Live Site

A platform where interests become friendships. (Express, Sequelize, React, and Redux)

Github

- Leveraged the use of a normalized Redux store to improve time complexity with no space tradeoffs on frequently accessed, updated, and deleted data.
- Designed a relational database schema in PostgreSQL to support application functionality. Created tables, relationships, and constraints to optimize data storage and retrieval, resulting in efficient and reliable performance.
- Incorporated Postman for comprehensive API testing and automation, enhancing test reliability and efficiency. Integrated this with Mocha/Chai to establish a robust testing suite, resulting in improved application stability.

• Automating the Processing and Analysis of mTrackJ Cell Motility Data

Mar - May 2020

Dr. David Knecht: Cell Biology Laboratory

- Developed a script that uses Python to automate the processing and visualization of data generated using the ImageJ plugin mTrackJ, empowering biologists to focus on the work that matters to them.

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 (During Summers)

Research Assistant

Farmington, CT, USA

- Investigated the biochemistry, cell biology, and pharmacology of sphingosine-1-phosphate modulators in renal fibrosis and renal cell carcinoma.

EDUCATION

• App Academy

Remote, USA

Full-stack Web Development Bootcamp

Graduated May 2023

• University of Connecticut

Storrs, CT, USA

Bachelor's of Science in Molecular and Cell Biology

Graduated May 2021