



# Cameron Beck

Bachelor of Science  
in Molecular and Cell Biology  
University of Connecticut

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LinkedIn

Github

## TECHNICAL SKILLS

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- **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

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- **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
  - Led 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.
- **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
  - 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

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- **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

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- **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