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, SQL, HTML / CSS.
- **Frameworks**: React, Redux, Express, Sequelize, Node.js, Flask, SQLAlchemy, NumPy, Matplotlib, Pandas, Selenium.
- **Other**: Test-Driven Development (TDD), Version Control Systems (VCS), Object-Oriented Programming (OOP), Pair Programming, Scrum, Agile Workflow, AWS S3.

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 easy refactoring and upgrading.

- **Full-stack Web Application: Smack** ***Live Site***

A live messaging app for your organization, inspired by Slack. (AWS S3, Flask, 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.

- **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 efficient extraction, transformation, and visualization of large-scale single-cell RNA-seq datasets.
  - 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 (S1P) modulators in renal fibrosis and renal cell carcinoma.

Education

University of Connecticut *Storrs, CT, USA*

Bachelor's of Science in Molecular and Cell Biology Graduated May 2021