amaustin@ucdavis.edu

# Allison Austin

Website

## Education

**California State University, Long Beach** **August 2019 - May 2023**
*Bachelor of Science, Computer Science*

GPA: 3.93/4.0

## Publications

B. Fu, **A. Austin**, and M. Garcia. *Visualizing Mappings Between Pairwise Ontologies - An Empirical Study of Matrix and Linked Indented List in Their User Support During Class Mapping Evaluation.* In Proceedings of the 22nd International Semantic Web Conference (ISWC 2023), LCNS, Springer, 2023

## Research Experience

**Research Assistant** **August 2022-May 2023**
*CSULB Data Semantics and Human-Data Interaction Lab* *Long Beach, CA*

Worked on *Visualizing Mappings Between Pairwise Ontologies* as the lead researcher second author with Dr. Bo Fu.

- Conducted user study of the matrix and the linked indented list visualizations in their visual support for users during human evaluation of class mappings established between pairwise ontologies.
- Designed and executed task-based experiments with 81 participants while obtaining data from Gazepoint eye tracker.
- Evaluated the extent to which a given visualization supports recognition of visual cues, validation of existing mappings, and creation of new results using eye tracking data, task success, and task completion time.

## Industry Experience

**Data Engineer Intern** **May 2022 - August 2022**
*Amazon* *Seattle, WA*

- Migrated large-scale ETL pipeline to Native AWS for real-time workforce management and analytics software.
- Designed and implemented upsert logic for updating agent statistics table.
- Translated existing ETL jobs into one merged Glue job that handles the processing of three different streams.
- Automated workflow using CI/CD pipelines for deploying AWS resources (Kinesis Stream, Glue Streaming jobs, Glue tables, S3 buckets).
- Received a full-time offer from the Partner Support and Solutions (PSAS) team.

**Data Engineer Intern** **May 2021 - August 2023**
*Nihon Kohden Digital Health Solutions* *Irvine, CA*

- Enhanced the usability and improved the performance of real-time and historical medical data visualization applications.
- Optimized queries to data warehouse and data lake for viewing and extracting patient data.
- Designed and prototyped a web application for viewing and analyzing alarm data with aggregated metrics and interactive UI components.

- Researched methods of fitting time-series data and classification of alarm thresholds for optimizing vital sign alarms.
- Assisted in patent approval process for work on alarm simulation feature.

## Academic Projects

**CECS 327 Introduction to Networks and Distributed Computing** **Fall 2022**

- Researched solutions to query processing on heterogeneous data stores (data federation/ontology-based data access/tensors).
- Worked with undergraduate student peers and Professor Malik Luti to develop a query execution engine similar to BigDAWG.

**CECS 456 Machine Learning** **Spring 2022**

- Implemented Cox Regression to predict survival probabilities of death events from heart failure dataset.
- Plotted Kaplan-Meier Fitter of different features to test significance of variables.
- Analyzed the cost/benefit of using baseline hazard function in Cox model.

## Awards/Grants

2022 California State University's Program for Education and Research in Biotechnology (CSUPERB)

## Community Involvement

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| 2023 BEACH Women in Engineering Conference, *Volunteer* | April 2023 |
| CSULB Women in Computing (WiC) Sisterhood, *Mentor* | August 2022-May 2023 |
| 2022 BEACH Women in Engineering Conference, *Volunteer* | April 2022 |
| Mathematics, Engineering, Science Achievement (MESA), *Volunteer* | March 2022 |
| Louis Stokes Alliance for Minority Participation (LSAMP), *Member* | February 2022-May 2023 |
| CSULB CS Undergraduate Student Advisory Board, *Volunteer* | February 2022 |
| CSULB Women in Computing (WiC), *Treasurer* | August 2021-May 2022 |
| MarinaHacks, *Design Committee Volunteer, Sponsorship Committee Lead* | January 2021 |

## Skills

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|---|---|
| **Programming** | Python, Java, C, C++, Matlab |
| **Data Visualization** | Canvasjs, D3.js |
| **Machine Learning** | Scikit-learn, TensorFlow, Keras |
| **ETL** | AWS, Apache Spark, MySQL, PostgreSQL |
| **Other** | GitHub, IBM SPSS, Gazepoint |

## References

**Dr. Bo Fu**
Boeing Endowed Professor of Computer Science at CSULB bo.fu@csulb.edu

**Prof. Malik Luti**
Adjunct Professor of Computer Science at CSULB malik.luti@csulb.edu