# Albert Stanley

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## Education

**University of California, Davis, GPA: 4.0/4.0**                                     *Davis, CA*

B.S. IN COMPUTER SCIENCE AND ENGINEERING                                     *September 2018 - June 2022*

- **Courses:** Web Programming, Development In UNIX and C/C++, Data Structures, Artificial Intelligence
- **Clubs:** Artificial Intelligence Society, RoveCrest Mars Rover Navigation Team, Boxing Club

## Experience

**Al-Bassam Laboratory of Microtubule Dynamics, Structure and Mechanism**                *Davis, CA*

UNDERGRADUATE RESEARCH ASSISTANT                                              *June 2017 - May 2018*

- Used computational tools (RELION and crYOLO) to reduce time required to detect and box out particles in microscope images.
- Created labelled training data sets from 30 - 40 images to allow picking particles from 3000 - 4000 unlabelled images
- Collaborated with other undergraduate assistants to manage processing new and old datasets.

## Projects

**Innovation Minds Recommendation System**

ARTIFICIAL INTELLIGENCE SOCIETY CLUB INDUSTRY PROJECT                                *December 2019*

- Worked in team of four students and Innovation Minds developers to implement recommendation engine on a human resources web platform.
- Developed and implemented algorithm in Python to sort users based on personality and skill data to find suitable teammates.
- Created endpoint with Flask to allow Innovation Minds web development team to query teammates from our algorithm.

**TouchCard - Personalized Postcard Creator**

WEB PROGRAMMING COURSE PROJECT                                                *January 2020*

- Users can upload a photo, text, and customizations for a postcard and share their postcard using a link provided by the web application.
- Developed front end in HTMl, CSS, and Javascript.
- Server side code written with Express.js and uses SQLite to store postcards in database and retrieve them for viewers.

**Mars Rover Competition Path Planner**

RoveCrest AUTONOMOUS NAVIGATION PROJECT                                      *November 2019*

- Python module allowing users to load occupancy grid data and view optimal path.
- Converts path into timed velocity commands that the rover can follow.

**MapRouter - Davis Trip Planner**

DEVELOPMENT IN UNIX AND C/C++ COURSE PROJECT                                 *October 2019*

- Program loads raw XML and CSV data of Davis streets, speed limits, and bus routes.
- Finds optimal path using Dijstra's algorithm based on user preference - shortest time vs shortest path.

## Skills

**Languages**    Python, C, C++, Java, Javascript, SQL, HTML/CSS

**Technologies**    SQLite, Express.js, Flask, NumPy, Pandas, Scikit-learn

## Leadership

**Artificial Intelligence Society**                                                  *Davis, CA*

TUTOR                                                                  *January 2020 - Current*

- Taught basics of supervised machine learning including understanding of training data, validation set, test set.
- Used scikit learn to implement linear regression with a housing data set and logistic regression for a hand written digit recognition task.

**Emergency Medicine Research Associate Program**                                *Sacramento, CA*

CLINICAL RESEARCH ASSOCIATE TRAINER                                          *September 2018 – June 2019*

- Trained new volunteers in emergency department research protocol, informed consent, and research study details.
- Actively communicated with hospital staff and research team to validate patients that meet study requirements.
- Screened Electronic Health Records (Epic EHR) at UC Davis Medical Center for patients that would qualify for each study.
- Clarified privacy concerns when speaking with eligible patients by talking about protection under HIPPA.