

# Kevin Kuo

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## EDUCATION

**PENNSYLVANIA STATE UNIVERSITY** | B.S IN COMPUTER SCIENCE  
College of Engineering | University Park | State College, PA | GPA: 3.1 / 4.0

Expected May 2021

## SKILLS

Python < Preferred > // Java // JavaScript // C // C++ // Linux // OpenCV // Scikit-learn // Tensorflow

## INTERNSHIP

**LUNAR LION** | SOFTWARE ENGINEERING INTERN May 2018 – Aug 2018 | Research Center C, State College, PA

- Created the communication system for Peroxide Engine Test Stand 2 to send telemetry & command data between Ground Control Station and Guidance, Navigation, & Control subsystem using ZeroMQ.
- Automated testing procedure by adding flight profile functionality and debugged the old UI of Ground Control Station.
- Detected failure of the engine by implementing softkill which processed thermocouple, pressure transducer and load cell data readings.
- NASA PA Space Grant Scholarship.

## RESEARCH

**INTELLIGENT VEHICLE & SYSTEM GROUP** | UNDERGRAD. RESEARCHER Jun 2018 – Present | State College, PA

- Implemented linear discriminate analysis (LDA) and support vector machine (SVM) to classify EEG signals between rest, right hand, and left hand movements using an online EEG motor imagery data set.
- Implemented linear regression analysis model of a research paper using linear algebra techniques to filter out unwanted EOG artifact signals from the EEG data set.

## LEADERSHIP

**DISNEY CORPORATE PROJECT** | NITANNY DATA LAB

Aug 2017 – Present | State College, PA

- Lead a team of 6 to create a retrieval based chatbot with personalities based on Disney movie characters using natural language processing (NLP) methods.
- The Chatbot was proposed to the Director and Manager of the Data & Analytics at Walt Disney Animation Studios, which successfully received continuation of the project.
- Hackathon: Implemented K-mean Clustering algorithm to compute the optimal coordinates for setting up emergency relief camp, in the event of a natural disaster, given users' critical data gathered by the chatbot.

## PROJECTS AND ACTIVITIES

**UNMANNED AERIAL SYSTEM (UAS)** | COMPUTER VISION SUB TEAM Aug 2017 – Present | State College, PA

- Created drone's software to detect targets on the ground given the camera feeds.
- Extracted the relevant areas of interests in the images using OpenCV's saliency algorithm, currently building a synthetic image data set for training the convolution neural network.

**STUDENT SPACE PROGRAM LABORATORY**

Feb 2017 – Present | State College, PA

- Student Training Program: Wrote the teensyduino code which collected, processed, stored, and transmitted data from the rocket that was launched to 500 meters above sea level. | Feb - Apr
- G-Chaser: a joint mission with NASA. Worked under the Command and Data Handling - contributed to the UART Class by debugging and configuring the termios bit flags based on the known hex configuration values. | May - Present

## PERSONAL PROJECT

**FACEBOOK AI CHATBOT** | RESPONSE GENERATION & SENTIMENT ANALYSIS

July 2017 – Present

- Utilizes Messenger's UI to generate conversations with users and perform sentiment analysis on each utterance.
- Using Sequence to Sequence model with attention decoder to generate response based on the previous utterance.
- The neural network is written in python with Tensorflow using the starter code from Stanford CS 20SI's assignment, and the backend is written in node.js with Facebook Chat API.