

Nan Qiang

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EDUCATION

- University of California, Santa Cruz **September 2022-Present**
 - M.S. in Natural Language Processing
- University of California, Irvine **September 2018-June 2022**
 - GPA: 3.69
 - B.S. in Computer Science and Specialization in Intelligent Systems
 - Relevant Classes: Machine Learning, Artificial Intelligence, Algorithms Design and Optimization, Software Engineering, Data Mining/Information retrieval, and System Design
 - Major GPA: 3.84
 - 8 Deans Honor List
- Saddleback Community College: **May 2018-May 2019**
 - GPA: 4.0
 - Three Computer Science classes: Introduction to CS with C++
- Irvine Valley College **May 2017-August 2017**
 - GPA: 3.5
 - Two general education classes

RELEVANT PROJECT/COURSE WORK

- Chinese Conversational Bot on Reddit** **October 2022-Present**
- Used Chinese-speaking subreddits as the source of the corpus.
 - Used pre-trained **BERT** Chinese model
 - Still in development

Natural Language Inference for Clinical Trial Report (SemEval 2023)

- October 2022-December 2022**
- Constructed **NLI** models for analyzing clinical trial reports on breast cancer, enabling automated understanding of complex premise-hypothesis pairs
 - Researched and utilized various techniques for abbreviating clinical trial reports
 - Tested **BERT** and **deBERTa** model

- Achieved an f1-score of 0.6 on training data and 0.51 on test data by utilizing the **deBERTa** mode

IOB Sequence Tagging

September 2022-October 2022

- Employed pre-trained **GloVe** embeddings
- Implementation of **Bidirectional LSTM**
- Achieved 0.73 f1-score on IMDB movie review dataset

Search Engine w/ Web Crawler

October 2021-December 2021

- Text cleanups included the removal of invalid characters and lemmatization
- Constructed an inverted index for crawled data
- Ranked the search result importance by using **tf-idf** scores combine with **cosine similarity**
- Worked as a team by strictly following the Agile software development cycle

Adversarial Machine Learning in Image Recognition

January 2021-March 2021

- Implemented **Momentum Diverse Inputs Fast Gradient Sign Method** for attacking the white box image recognition model
- Introduced 70% misclassifications from the CIFAR-10 dataset into the model, which received a score of 9.4/10 when compared to other designs from classmates
- Worked as a team by following the Agile software development cycle

Checkers AI

September 2020-December 2020

- Incorporated **Monte Carlo Tree Search** with **rapid action value estimation**
- Black box testing against hard-difficulty AI and winning 80% of the time

SKILLS

Languages: English, Chinese

Programming Languages: Proficient with Python, Some experience in C++, Java, SQL

Python Libraries: Numpy, Scipy, Scikit learn, Pytorch, Pandas, NLTK, Gensim, Tensorflow, Matplotlib

Natural Language Processing: Data parsing, Feature extractions, Word embeddings, Sequence Tagging, Pre-Trained models

Other: Microsoft Office Suite, VirtualBox

Environment: Windows