

HAIKANG DENG

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TECH SKILLS

Programming Skills: Python, PyTorch/TensorFlow, Java, SQL, R(basic), Matlab(basic)
Models: CNN, RNN(GRU/LSTM), Transformer, GAN

WORK EXPERIENCE

Lenovo May 2021 - Aug 2021
Software Developer Intern Beijing, China

- Participated in design of Control Chart and Anomaly Detection Module
- Used Encoder-Decoder RNN for anomaly detection on time series data
- Performed model tuning and data grouping which improved f1 score from 0.41 to 0.48
- Wrote an algorithm for calculating Process Capability Index (CPK & PPK)

Zhongchao Credit Card Industry Development Co., Ltd Jul 2020 - Aug 2020
Software Developer Intern Zhejiang, China

- Studied blockchain data structure and Solidity programming
- Wrote an Ethereum smart contract on medical data management
- Deployed the smart contract to private chain network and created a user interface

Datang Network Co., Ltd Jun 2019 - Jul 2019
Software Developer Intern Beijing, China

- Wrote a regression function to predict video's view count within a year
- Performed data filtering on video data using python

RESEARCH EXPERIENCE

Tsinghua University Aug 2017 - Jun 2018
Femoral Correction Surgery Auxiliary System Group led by Prof. Zheyao Wang

- Applied six-axis accelerometer to measure angular displacement
- Built 3D model to hold electronic components and developed android interface to display data
- Used Bluetooth micro-controller to transmit data between sensor and app

PROJECTS

Caption with Attention Jun 2021

- Captions image with CNN+LSTM model and top-down attention
- Visualizes stepwise attention on image
- Achieves BLEU-1, BLEU-2 score of 65.5, 47.5

Spam Classifier with CNN and Embedding Apr 2021

- Classifies text message using multi-gram CNN and word embedding
- Casts word embedding into 2d plot for visualization, utilizing Singular Vector Decomposition
- Achieves accuracy of 98.88% which outperforms SVM and Naive Bayes models

EDUCATION

University of North Carolina, Chapel Hill Aug 2019 - Present
3rd Year, Computer Science & Mathematics, B.S. Overall GPA: 3.97/4.0

ACADEMIC ACHIEVEMENTS

Successful Participant, MCM 2021 Dec 2021
UNC Dean's List Dec 2019
9th Place in China/27th Place Worldwide in AAPT Physics Bowl Apr 2018
Top 5% of AMC 12, AIME Qualifier Feb 2018
Second Prize, NSS-NASA Ames Space Settlement Design Contest Apr 2017