

# JOEY CHEUNG

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## PROFESSIONAL EXPERIENCE

**Total Expert, Software Engineer,** Minneapolis, MN

*Dec 2020 – present*

- Create backend services such as endpoints to improve experience to loan officers in PHP
- Participate in Regression testing code using functional testing as well as joining in code reviews
- Optimization of email subject line and content using conversion rate with Machine Learning models such as LR and RF

**Dow Jones – The Wall Street Journal & Barrons, Data Scientist,** New York, NY

*June 2019 – Dec 2020*

- Created models such as XGBoost, RF, DT, Logistic Regression, Hierarchical Clustering, DB Scan, K-means, LDA, and ARIMA
- Extracted and utilized data from internal Dow Jones database's into GCP's Big Query to be queried for Naïve Bayes model
- Feature engineering using techniques such as TFIDF, N-grams, dimensionality reduction, word embedding, and PCA
- Automated a performance monitor to show visualizations on google sheets using shells scripts, python modules, and NodeJS
- Preprocessed data for noise removal using lemmatization, feature scaling, stemming, and removing stop words
- Commenced hyper parameter tuning using grid search, and feature selection to prevent overfitting of the model
- Imputed missing data using techniques such as Random Forest imputation and kNN imputation
- Use Google's pretrained BERT model for transfer learning for sentiment analysis with CNN and RNN in TensorFlow
- Optimized sentiment analysis scoring process by creating a Slackbot to catch user feedback weekly

**2U, Data Science Tutor,** Lanham, MD

*Feb 2021 – present*

- Explain technical data science concepts to students from universities such as Columbia, Georgia Tech, MIT, and UPENN
- Debug and assist in correcting code from students in projects such as modeling, data visualization, and ETL

**US Army, Military Police,** Shoreham, NY

*Dec 2011 - Dec 2017*

- Deployed to Guantanamo Bay, Cuba to conduct internment/resettlement operations in support of Operation Enduring Freedom
- Received the Global War on Terrorism **Expeditionary** Medal, 2014-2015
- Fulfilled many tasks under high stress situations with extremely high attention to detail of surroundings in garrison environment
- Coordinated with soldiers below and above in rank to ensure that missions are completed in a timely and efficient manner

## EDUCATION

**Queens College,** Flushing, NY

*Graduation date: 2019*

- Major in Bachelor of Science, **Computer Science**
- Relevant coursework: Probability & Statistics, Linear Algebra, Database, Natural Language Processing, Quantum Computing, Linear Programming and Game Theory, Data Structures, Data Analytics, Genetic Algorithms, Design and Analysis of Algorithms

**Independent Study,** Flushing, NY

*2019*

- Conduct research on SMT model using machine translation as a possible technique for grammatical error correction
- Research on using Genetic algorithms compared to backpropagation algorithms to train feed forward neural networks

## DEVELOPMENT PROJECTS

**Topic Modeling Summarizer,** Independent Project

*2019*

- Python: Used libraries such as Sklearn decomposition to create a Latent Dirichlet Allocation model and preprocessed data
- Successfully summarized various PDFs using unsupervised model to acquire most popular topics for short stories and research articles

**Machine Translation Spelling Correction,** College Research

*2019*

- Implemented neural network sequential model with LSTM, and Dense layers using Keras and Tensorflow libraries in Python
- Obtained a 30,000-row parallel corpus to gauge if using machine translation is suitable for grammatical error correction

## TOOLS AND LANGUAGES, BY SKILL

**Tools,** Anaconda, GCP, Jupyter Notebook, Pandas, Numpy, Sklearn, Tensorflow, Git, Arch Linux, Docker, AWS, Matplotlib

**Languages,** Python, Java, C++, JavaScript (AJAX, jQuery), HTML/CSS, MySQL, LISP, Shell Script, PHP