Char Juin Chin

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Python, Java, Scheme, HTML, SQL

chincharjuin.github.io

Education

University of California, Berkeley   Aug 2020 – May 2024 (Expected Graduation)
- Sophomore, BA in **Computer Science** and **Linguistics** (4.0 GPA, Dean's List - Spring 2021)
- *Relevant Coursework*: Abstract Programming in Python, Data Structures, Computer Architecture, Discrete Mathematics and Probability Theory, Efficient Algorithms and Intractable Problems, Linear Algebra and Differential Equations, Data Science, Linguistic Science, Syntax of Natural Language, Phonetics of Natural Language

Anglo-Chinese School (Independent), Singapore   Jan 2016 – Nov 2017
- International Baccalaureate: 44/45   SAT: 1580/1600   SAT Physics: 800/800   SAT Math Level 2: 800/800

Experience

Data and Analytics Intern   May 2021 – Jun 2021
Information Technology Department, Singapore Airlines
- Presented data on adoption rates of an e-Commerce platform to management through modeling in **Scikit-learn** and **CatBoost**
- Directed future marketing plans by identifying 4 key triggers that predicted user adoption using feature importance analysis
- Achieved an F-score of 0.58 by accounting for data deficiency and dataset imbalances of 1 to 90 with data sampling in **Pandas**
- Facilitated data analysis by constructing a data dictionary of over 240 **Firebase** events for an in-house customer application

Research Apprentice   Jan 2021 – Present
Linguistics Research Apprentice Practicum, University of California, Berkeley
- Aided gesture analysis by creating gesture annotations for over 50 different clips from television in spreadsheets and **ELAN**

Ground Experience Development Intern   Mar 2020 – Apr 2020
Customer Care Services Department, Singapore Airlines
- Ensured smooth implementation of a newly developed voucher issuance system by performing integration tests using **Gherkins**
- Prevented customer backlash by catching 2 critical errors during User Acceptance Tests of an online COVID assistance form
- Evaluated the performance in semantic analysis of an in-house feedback analytics model by validating over 1000 test cases
- Streamlined testing of systems undergoing development by automating the generation of customizable test scripts in **Python**

Student Researcher   Nov 2016 – Nov 2017
*Institute for Infocomm Research, Agency for Science, Technology, and Research (A*STAR), Singapore*
- Designed a bi-directional recurrent neural network, trained in English corpora, to predict punctuation using **Python** and **Lua**
- Developed a deep learning model that improved overall punctuation predictions over previous state-of-the-art models by 10%
- Implemented an attention mechanism, biased decoding, and part-of-speech tagging with the **Stanford Part-of-Speech Tagger**

Leadership and Awards

Singapore Airlines Open Overseas Scholarship   Jul 2020
- Selected as one of three recipients nationwide for a full-ride overseas scholarship from Singapore Airlines in recognition of academic excellence and leadership potential after interviews with senior leadership and an internship assessment.

Agency for Science, Technology, and Research (A*STAR) Science Award   Aug 2016
- Awarded as one of 100 students nationwide for a developmental program in the sciences in view of academic achievements
- Offered a research opportunity with the organization to explore extra-curricular research with professional mentorship

Lieutenant, Singapore Armed Forces (SAF)   Jan 2018 – Nov 2019
- Led the operations branch of an active-duty battalion of 500 men through two battalion exercises to operational readiness
- Directed battalion safety-related initiatives as a Safety Officer, achieving full audit clearance by the Army Safety Inspectorate
- Recipient of the Commanding Officer's Coin and Letter of Appreciation for leadership qualities and contributions to the unit

Publications and Projects

C. C. Juin, et al., "Punctuation prediction using a bidirectional recurrent neural network with part-of-speech tagging," TENCON 2017 - 2017 IEEE Region 10 Conference, 2017, pp. 1806-1811, doi: 10.1109/TENCON.2017.8228151.
- Expanded the scope of previous state-of-the-art punctuation prediction models by predicting 11 different punctuation marks
- Designed a neural network that achieved an overall F-score of 0.785 across all tested punctuation marks and an F-score of up to 0.986 on select punctuation marks using **Tensorflow** and **OpenNMT Torch**, exceeding the performance of previous models
- Presented our research findings to an international audience during the 2017 IEEE Region 10 Conference in Penang, Malaysia

Gitlet   Feb 2021 – Mar 2021
- Developed a version control system in **Java** that supported functions like commits, restores, logging, branching, and merging
- Implemented support for remote repositories and distributed version control, enabling push, fetch, and pull functionality

Eyes of the Ninja   Mar 2021 – Apr 2021
- Developed a 2D tile-based game engine in **Java** that supported pseudo-random world generation and playable environments
- Implemented interactivity that enabled players to explore the world and fight enemies through a unique line-of-sight system