Arun Wongprommoon

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Education

MIT: Master of Engineering in Computer Science   Sep 2023 – Jun 2024
- Thesis: Multimodal Audio-Visual Multispeaker Diarization and Speech Recognition by modifying Fairseq HuBERT
- Coursework: Linguistics in K-12; Demystifying LLMs; Deep Learning; Machine Learning for Inverse Graphics

MIT: Bachelor of Science in Computer Science, GPA 5.0/5.0   Sep 2019 – Jun 2023
- Coursework: Advanced Natural Language Processing; Spoken Language Processing; Signals and Systems; Advances in Computer Vision; Computer Graphics; Digital Image Processing; Software Studio; Performance Engineering

MIT: Bachelor of Science in Linguistics, GPA 5.0/5.0   Sep 2019 – Jun 2023

Previous Research Experience

Spoken Language Systems Group: MIT Computer Science and AI Lab   Spring 2023
- Examined MetaAI's unit-to-unit speech translation model without text representation, which uses HuBERT and K-Means
- Constructed a multilingual translation model by concatenating vocabulary, increasing BLEU scores by a few points
- Researched various alternative state-of-the-art models, adapter training as well as finetuning frameworks

Improve the News: MIT Quest for Intelligence   Summer 2020, Spring 2021
- Collaborated with Max Tegmark to create an AI news aggregator app that informs users of implicit bias in news
- Trained an ensemble topic classification model combining GPT and BERT, achieving 80% precision on the *NYT* corpus

Ambient Detector   May 2016 – March 2017
- Made an Android app that recognizes and identifies sounds by recording, calculating the FFT and matching profiles
- Won third place in Thailand's National Software Contest for high school students, presented in assistive tech forums

Work Experience

Robinhood: Android Engineer Intern   June 2023 – August 2023
- Expanded screens and personally extended Robinhood's peer-to-peer product to support multi-user cash payments
- Enhanced overall product stability with code migration, unit test addition, feature implementation and bug resolution

Duolingo: Software engineer intern   Summer 2022
- Added onboarding screens post subscription purchase, enhancing UX and awareness of the purchase flow on Android
- Utilized Firebase analytics for targeted advertising, effectively identifying potential spenders or high-risk churn users
- Boosted daily bookings by $1,000 through A/B testing experiments and diligent metric measurements

Cambridge Mobile Telematics (CMT): Software engineer intern   Summer 2021
- Engineered an Android application from scratch demonstrating the usage of CMT's core SDK codebase and API calls
- Boosted the company's customer reach by providing a fully functioning template made in Kotlin with modern practices

Competitive Programming Achievements

International Olympiad in Informatics: Silver medalist (79th percentile)   2017
Google Code Jam: Round 2 finisher (95th percentile, 92nd percentile)   2020, 2021
USA Computing Olympiad: Platinum division   2019

Clubs, Societies and Extracurriculars

The Tech, **MIT's Student Newspaper:** Co-publisher, Managing Editor, Business Manager, Production Editor   2020 – 2023
MIT IEEE Eta Kappa Nu Honor Society: Marketing Officer and Executive Board Member   2022 – 2023

Skills: AI research   Pytorch, Fairseq, Hydra, Transformers, Diffusion, HuBERT, Signal Processing, Tensorflow, Keras
Skills: Android Development   Kotlin, Jetpack Compose, MVVM, Data Structures, Algorithms, Front-end, UI/UX, Java
Skills: Miscellaneous   C/C++, Embedded Systems, Assembly, UNIX, Git, Morphology, Syntax, Semantics, French, Thai
Interests   Photography, Video editing, 3D animation, Urban planning, Visual Arts, Design, Music, Squash, Rock Climbing