Andrew Huang

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EDUCATION

Stanford University (GPA: 4.0) **Stanford, CA**
Bachelor of Science in Computer Science *June 2020*

Thomas Jefferson High School for Science and Technology (GPA: 4.55) **Alexandria, VA**

SKILLS

- Advanced knowledge of machine learning, deep learning, and learning theory
- Strong skills in Java, Python, C, C++, as well as TensorFlow and PyTorch for machine learning
- Familiar with JavaScript, SQL, Swift, CSS and HTML, cloud computing, and Unix/Linux environments
- Experienced with algorithms, data structures, probability/statistics, cryptography, and mathematical analysis

EXPERIENCE

Facebook **Seattle, WA**
Software Engineering Intern *June – September 2019*

- Rebuilt language models for Facebook Search, leading to increased candidate recall and faster inference speed
- Shipped significant infrastructure changes impacting multiple other teams and billions of user queries per day
- Reformulated ranking task to incorporate more signal, increasing performance without drop in speed
- Implemented new smoothing methods resulting in 80% drop in perplexity without increase in training time
- Refactored code so other NLP teams at Facebook can integrate improved code seamlessly

Stanford Machine Learning Group **Stanford, CA**
Research Assistant under Professor Andrew Ng *January 2018 – February 2019*

- Developed novel techniques for robust, sparse, human understandable interpretation of neural networks
- Carried out studies for validation and deployment of state-of-the-art chest neural network-based X-ray abnormality detector with Stanford Medical School and healthcare providers in the US, Tanzania, and the Congo
- Implemented 3D neural networks for predicting acute pulmonary embolism from chest CT data at level of radiologist
- Publication under review at Lancet, a top medical journal

Epoch Investments, Inc. **New York, NY**
Quantitative Research Intern *June – August 2018*

- Started firm's AI program, built first sets of NLP applications for financial texts, laying groundwork for future projects
- Constructed deep classifiers for extracting important text from financial documents 1000x faster than an analyst
- Designed and implemented a fast, abstractive reinforcement learning model to summarize long financial documents
- Developed user-friendly tools to visualize change in language over time, clustering phrases from similar topics

Northrop Grumman Corporation **Herndon, VA**
Software Engineering Intern *June – September 2017*

- Worked in an Agile-like team environment of 15+ developers to build a cloud-based mission system
- Led redesign of large web application from object-oriented to functional framework (wrote 1000+ loc, saved 1500+)

Fellowship at National Institutes of Health **Bethesda, MD**
Summer Intern *June - August 2015*

- Performed research under field-leading researcher regarding novel cell secretion pathway implicated in Parkinson's
- 10-week internship, presented research at an NIH symposium, which later contributed to a paper in *Nature*

NOTABLE PROJECTS **Stanford University**

- *Machine Learning*
  - Developed models to predict sovereign default from publicly available data, outperformed S&P credit ratings
  - Built RL system for a quadruped robot to perform backflips using proximal policy optimization
- *Computer Systems*
  - Implemented MapReduce system for parallel and distributed computing
  - Built a Unix shell, RSS Feed Aggregator, industrial-grade web proxy, and threadpool in C
  - Built a cryptographically secure password manager and a Signal-style end-to-end messaging client

HOBBIES: Hot sauce enthusiast, crossword fiend, makes good scrambled eggs