Yili Hui

Curriculum Vitae
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PROFESSIONAL EXPERIENCE

- **Microsoft** — Redmond, WA
  Software Engineer — *2020 - 2021*
  - **Implement a caching mechanism for cloud identity management (Azure Active Directory) (C#)**
    * Designed and developed a caching mechanism for datacenter machines to enhance reliability for datacenter connection.
    * Built metrics and emitted logs to monitor system health.
    * Participated in oncall rotations to mitigate incidents and help Azure provide better customer services.

- **Google LLC** — Mountain View, CA
  Software Engineer — *2019 - 2020*
  - **Improved Speech Recognition Using Semi-Supervised Learning (Python):**
    * Led MixUp data augmentation on speech data using TensorFlow to train RNNT model and **decreased the relative word error rate by 17%** compared to benchmark results.
    * Drove FixMatch data augmentation on speech data to **reduce client-side labeled data requirement by 450k utterances** in the federated training.
    * Defined and implemented additional metrics to guide FixMatch experimentations and **decreased the development time by approximately 15%**.
    * Documented internal infrastructure and experiment results for guiding future projects.
  - **Improved User Experience by Collecting User Signals and Reducing Information Serving Time (Java):**
    * Built a data pipeline using **MapReduce**, and a dashboard to generate and display statistical insights of Google Play Store usage.
    * Increased new paying users (NPU) conversion rate in the Google Play Store by training a model on user data to recommend eWallets.
    * Extracted top-seller information from the data pipeline and displayed the top-seller badges as **a global feature in the Google Play Store**.
    * Integrated caching mechanism to reduce app information serving time **from 200 ms to under 5 ms**.

- **Desentric Databases** — Atlanta, GA
  CTO, Co-Founder — *2018 - 2019*
  - **Funded by Georgia Tech startup incubator Create-X with $20,000 initial investment.**
    * Desentric Databases provided clients with organized and cleaned raw data for model training.
    * Used MATLAB to prototype image recognition models to recognize automobile images acquired by dash cams.
    * Designed, implemented and maintained the company website on **Amazon Web Services (EC2)** with **HTML5, CSS and JavaScript** and set up **MySQL** database to record clients' responses.

PERSONAL PROJECT

- **Built an Online Banking System with Java, Angular and Spring** :
  * Created an online banking services in which users could deposit, withdraw and transfer money between accounts. Admins could see the user and appointment lists. The app followed **design patterns** like **Model-View-Controller** and **Dependency Injections**. **Git** was used for the source control.
  * **Frontend**:
    · Developed frontend user services with **Angular** and admin services with **Thymeleaf** to communicate with the backend through **RESTful APIs**.
  * **Backend**:
    · Leveraged **Spring Boot** to host **REST** service resources, which followed **RESTful APIs design principles**.
    · Integrated **Hibernate** to build up the persistence layer with an underlying **MySQL** database to abstract the information retrieval/update process and to prevent **SQL Injections**.
    · Utilized **Spring Security** to build up the security layer, which provided services like **authentication**, **authorization** and **access control**, and prevented attacks like **Cross Site Scripting**.

PROGRAMMING SKILLS

- **Languages**: Python, Java, C++, C, React Native, MATLAB, HTML, CSS, JavaScript

- **Software**: Google Colab, TensorFlow, NumPy, Keras, Pandas, MapReduce, Protocol Buffer

- **Certificates**: **Deep Learning Specialization** from deeplearning.ai

Education

- **Georgia Institute of Technology**   Atlanta, GA
  Bachelor Of Science in Computer Science   *2015 – 2019*
    - GPA: **3.9**
    - Minor in **Mathematics**
    - Concentration: **Intelligence** and **Info Internetworks**