Yufan Fei

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Education

- **Brown University** - *Major GPA: N.A* — Providence, RI
  M.S. in Computer Science; — *Aug. 2017 – Dec. 2018*
- **University of Maryland** - *Major GPA: 3.83* — College Park, MD
  Dual B.S. in Mathematics and Computer Science; — *Aug. 2013 – Dec. 2016*

Experience

- **Google LLC - Google Cloud Gaming** — Kirkland, WA
  Software Engineer — *March. 2019 - Present*
  - **Open Match**: Top project contributor of Open Match, a scalable and flexible matchmaking framework for Game Developers. Built the CI Pipeline; Implemented the monitoring and tracing support; Owned the performance benchamrk story in Open Match.
  - **Tools used**: **Go, gRPC, Kubernetes, Helm, Grafana, Prometheus, Jaeger, Redis**.
- **Amazon Service Inc. - AWS S3** — Seattle, WA
  Software Engineer Intern — *May. 2018 - Aug. 2018*
  - **Distributed Caching Service**: Designed a highly available, horizontal-scalable and fault-tolerant distributed caching service using consistent hashing. Deployed and tested the service in gamma environment. Once deployed in production, the service will speed up multi-part objects' indices lookup by 10 times and can save 0.8 billion I/Os per day.
  - **Builder Tools Migration**: Investigated and migrated 13 team packages to Gradle and resolved multiple plugin-incompatibilities. Improved project build time by 30 percent in average for rapid code development.
  - **Tools used**: **Java**, **Guice**, **Mockito**, **JUnit5**, **Gradle**.
- **Learnable.ai** — Boston, MA
  External Machine Learning R&D Engineer — *Oct. 2017 - Jan. 2018*
  - **Eye-tracking**: Diagnosed and reduced the classification error of **WebGazer.js**, a web-cam based eye-tracking js library, by 1/3 compared to the original. Proposed and trained a **Res-Net** based transfer learning model to extract more accurate facial landmark; Implemented a python server to render eye-gazed location with up to 50FPS.
  - **Problem Tagging**: Developed a n-gram natural language processing classifier. The model can map Chinese high-school problems to more than 1300 problem tags with over 80% top-5 accuracy. Remodeled the network architecture to recurrent neural network for better performance on long-range dependency sentences.
  - **Tools used**: **NLTK**, **fastText**, **OpenCV**, **PyTorch**, **CNN**, **LSTM**, **Flask-SocketIO**, **d3.js**
- **Brown University** — Providence, RI
  Research Assistant - Center for Vision Research — *Sep. 2017 - Aug. 2018*
  - **Prosthetic Headset Prototype**: Involved in developing a prototype for people with visual impairment. Functionality includes gesture tracking and object detection.

Projects

- **CryptoStorm**: Initiated a project that can track trading data from top 10 crypto exchanges in real-time. Devised a client interface for user interaction, a backend server that collects data to non-relational database, and a python framework that dynamically applies machine learning and reinforcement learning trading strategies to the server.
  - **Tools used: React.js**, **Redux**, **MongoDB**, **Tensorflow**, **Actor-Critics Algorithm**.
- **PuddleStore**: Implemented a minified **distributed file system**, OceanStore, in **Go**. Replicated two algorithms **Tapestry** and **Raft** with failure tolerant file locking feature.
  - **Tools used: Golang**, **gRPC**, **Apache ZooKeeper**.

Skills & Miscellaneous

- **Languages**: Advanced in Java, Python, Javascript, Go, Database. Proficient in R, OCaml, MATLAB, C++
- **Udacity Deep Learning Nanodegree** — *Jun. 2018*
- **Bloomberg CodeCon**: Tied for 3rd place among 67 contestants — *Oct. 2017*
- **MSFT Coding Competition**: 3rd place out of 30; Team size 2/3 — *Sep. 2017*
- **Nominated Student Speaker**: for the University Commencement Ceremony — *Nov. 2016*