Chun-Yen (Arbit) Chen

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Professional Experience

- **HTC** — New Taipei City, Taiwan
  Senior Software Engineer & Intern — *July 2011 - Sept 2017*
  - **Deep Learning Platform**: Built a deep learning platform based on the cloud platform and integrated with MXNet, Tensorflow, and Torch to accelerate the overall performance, and published a paper to a conference.
  - **Cloud Infrastructure**: Built a scalable and fault-tolerant cloud infrastructure that encompasses data caching and synchronization, user login, and push notification. The service is used by 3+ million users from 5+ major applications.
    - Led a team of 4 to develop DevOps tools to easily deploy and update applications across different major cloud service providers, such as Google Cloud Platform (GCP) and Amazon Web Services (AWS).
    - Minimized human errors and decreased the total deployment time by 20% with Golang and Docker.
  - **Medical Platform**: Cooperated with Taiwanese governments Ministry of Health and Welfare to develop a comprehensive suite of services for medical professionals.
  - **Adaptive Power Provider (Intern Project)**: Designed an adaptive program that determines the amount of power required in different screen-rotation configurations, solving dropped-call issue caused by temporary insufficient power supply.

Relevant Experience

- **UC Davis Team, 2018 Amazon Alexa Prize Challenge Finalist** — Davis, CA
  Team Lead — *Feb 2018 - Present*
  - **Social ChatBot**: Led a 12 members team, which is 1 of the 3 finalists over 195 applications from 15 countries. We represented UC Davis to participate in a social chatbot development competition[1]. The contribution is submitted as a technical paper to Amazon.
    - Developed a dialogue system that can serve average *1qps* and improved the architecture to reduce 80% latency.
    - Designed a dashboard to visualize and track subsystem performance. Data driven approach improved performance 17% over 6 weeks across Amazon Alexa users.
    - Created flexible A/B test environment for the conversational system over Amazon framework. This provided our team with the ability to perform A/B conversational research for numerous conference submissions.
- **VIDI Labs, University of California, Davis** — Davis, CA
  Graduate Student Researcher — *Sept 2017 - June 2018*
  - **EHR Backend**: Designed an Electronic Health Records (EHR) visualization backend utilizing InfluxDB.

Education

- **University of California, Davis** — Davis, CA
  Master of Science in Computer Science — *Sept 2017 – Expected Dec 2018*
- **National Taiwan University** — Taipei, Taiwan
  Master of Science in Communication Engineering — *Sept 2010 – Dec 2012*
- **National Central University** — Taoyuan, Taiwan
  Bachelor of Science in Communication Engineering — *Sept 2006 – June 2010*

Professional Skills

- **Expertise**: Large-Scale Distributed Computing Architecture, Deep Learning Platform, DevOps. Dialogue System
- **Programming Languages**: Golang, Java, Python, Javascript, Objective-C, C/C++, Matlab
- **Technologies**: GCP, AWS, Tensorflow, MXNet, Docker, HBase, Redis, Elasticsearch, InfluxDB

Publication

Shang-Xuan Zou, Chun-Yen Chen, Jui-Lin Wu, et al. Distributed training large-scale deep architectures. In *International Conference on Advanced Data Mining and Applications*, pages 18–32. Springer, Cham, 2017.

[1] https://developer.amazon.com/alexaprize/2018/gunrock