YUHANG (TONY) CHEN

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About Me

- **Married to a US citizen** (**In the process of Green Card Application and should get it within 1 year**).
- Had 1 year of professional work remote experience. Open to any onsite, remote, and hybrid positions.

Work Experience

Software Engineer — July 2021 - Present

Siemens EDA (Mentor Graphics), EDA Software Company — Portland, OR

- Implemented and tested **Unified Power Format (UPF) commands**, then integrated them into **Calibre Designed Solutions**, a world leading EDA software that is used by the semiconductor industry.
- New UPF commands were well-designed and bug-free, they perfectly empower the functionality of the Calibre product and benefit the users including **Intel, TSMC, Qualcomm, and Alibaba**.
- Developed Calibre product mainly in **C**, **C++, Python and Tcl script**.
- Designed function structures, developed new features, fixed bugs for the Calibre Product.
- Siemens EDA is a well-known company in the Electronic Design Automation (EDA) Industry.

Software Engineer Intern — June 2020 - Dec 2020

Siemens EDA (Mentor Graphics), EDA Software Company — Portland, OR

- Designed and implemented two major UPF commands with various related options according to **Intel**'s request.
- Wrote related unit tests and users' manual.
- Fixed a few C++ logical bugs by using GDB debugger and passed unit tests.
- Refactored thousands of lines of important code and added comments to improve the readability and efficiency.
- Had a six-month internship at the **Calibre team** and mainly used **C, C++, and Python**.

Software Engineer Intern — Mar 2019 - Sep 2019

Electro Scientific Industries, Semiconductor Related Company — Portland, OR

- Designed a **C#** program to process **100,000+** pieces of data from a chip verification machine.
- Applied different algorithms to analyze the data to help system engineers find exceptions and make decisions.
- Implemented algorithms including peaks and valley detection, polynomial best fit of the curve, normal distribution best fit of the curve, and logistic regression.
- The software helped system engineers draw graphs and do data analysis with different algorithms. As a result, they can select a threshold to separate good and bad capacitor chips in the chip verification machine.

Research Experience

Baby Behavior Psychology Analysis — Jan 2020 - July 2020

Alan. Fern (Professor and Associate Head of Research at Oregon State University) — Corvallis, OR

- Joined Dr. Fern's **ML research group** as an undergraduate research assistant and worked with other Ph.D. students.
- Using the videos from NYU Psychology Research Lab, I helped the Ph.D. students make a visualization website.
- The website simulates the movements of babies and toys. I implemented multiple features including the detection of the interactions between babies and toys and logged the history between babies and toy movements.

Self-Aware Comedy Robots — Sep 2019 - June 2020

Naomi. Fitter (Assistant Professor at Oregon State University) — Corvallis, OR

- Joined Dr. Fitter's **Robot research group** and did a senior capstone project with her for a year.
- Developed software using the Praat library to **extract raw data** from the recorded audio of the comedy robot.
- The raw data information includes mean, max/min, standard deviation of Intensity, and pitch.
- Created a Python program using **scikit-learn** to train machine learning models. It helped the robot detect and classify if the audience laughs during or after the joke.
- The models include k-nearest-neighbor, random forest, support vector machine, and ensemble model of all three previous models.
- Improved "post-Joke classification" accuracy from **53% to 85%** and set "Mid-Joke classification" accuracy to **73%**.

Education

Bachelor of Science: Computer Science — Graduated in June 2021

Oregon State University — Corvallis, OR

GPA: 3.87 Dean's List [2016-2021]

Skills

- C, C++, C#, Python, Java, JavaScript, jQuery, React, scikit-learn, Assembly, TCL script.