

# Chang-Yuan Shih

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## EDUCATION

### Rice University

Houston TX | Dec 2021

Master of Computer Science

- GPA: 3.95/4.0
- Highlighted courses: Web Development & Design • Parallel Computing • Database System Implementation • Object-Oriented Programming & Design

### National Taiwan University

Taipei, Taiwan | Jan 2019

B.S. in Computer Science and Information Engineering

- GPA: 3.85/4.3; Last 60 - 4.18/4.3
- Honor: Presidential Award (Ranked first 2018 Fall: 4.3/4.3)
- Teaching Assistant for course Data Structures and Algorithms
- Managed CSIE department's workstations that serves thousands of students and faculties

## EXPERIENCE

### Samsung SARC | Software Engineer Intern

Austin TX (Remote) | May 2021 – Aug 2021

- Project: GPU Compiler Fuzz Testing - Automated the testing of GPU compiler by creating a toolkit working with my customized version of open-source tool GraphicsFuzz. Effortlessly generates fuzzed test inputs, runs the tests, and reduces the erroneous fuzzed input for easy error identification
- Helped the team to identify errors for the compiler on the new Samsung Exynos mobile chipset.

### Academia Sinica | Research Assistant

Taipei, Taiwan | Apr 2018 - Jul 2020

(Internship: Apr 2018 - Jun 2019, Full-time Assistant: Jan 2020 - Jul 2020)

EMCLab, Research Center for Information Technology Innovation, Prof. Pi-Cheng Hsiu

- Distributed deep learning (DDL): Experiments for DDL strategies (ex. Synchronous Ring/Parameter-Server) for our new DDL platform framework with TensorFlow on AWS/GCP. Found and optimized the communication bottleneck for the DDL framework, which lowers the latency by 30% to 60%.
- Embedded DL: Real-time Keras-based SSR-Net (Age estimation network) on ARM-based device
- Intermittent DL: New convolution strategy concept for intermittent IoT devices

### Beyond Media Global | Technology Intern

Taipei, Taiwan | Nov 2018 - Jun 2019

- Project: Adeqo - Automated clients' weekly report processing by developed the full-stack of a Ruby on Rails, Python, PostgreSQL, Google Data Studio based SEO data retrieval and analysis platform
- Full-stack development for clients' website, IT support

### Freelancer | Full-Stack Web Developer

Remote | Dec 2019 – Now

- Clients' website design and development on a piecework basis; server and website maintenance
- Clients: Soar Cloud HR Solutions • ShangKai Steel • Lohas Glasses • and more

### The LanYang Ballet | Principal Dancer

Taipei, Taiwan | Jul 2008 - Aug 2020

- Fifth place in international ballet competition "Taiwan Grand Prix, 2013" among other professionals
- Practiced ballet since kindergarten and kept performed on stage annually since 2005

## CURRENT PROJECTS

### HS Modeled COVID-19 World Map | Rice University

Houston TX | Fall 2020 - Now

- A playable, self-updating COVID map powered by Google Data Studio and Python backend, Data analysis using Recurrent Neural Network on PyTorch.  
Link to the site: <http://hsmap.rice.edu> • Link to the GitHub repo: <https://github.com/cyshih73/HSMMap>
- Technologies used: React.JS, Python, PyTorch, Tableau, Google Data Studio, PostgreSQL

## SKILLS

C • C++ • Python • Java • HTML/CSS • JavaScript • React JS • SQL • Ruby • Ruby on Rails • Shell Script