

Hsu, SHU-HSUAN

PERSONAL DATA

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WORK EXPERIENCES

2018/10 - PRESENT

Full Stack Engineer, Kronos

Team Lead of Dark Pool Trading System:

I manage a team of 5 developers that focus on building a crypto-currency dark pool trading system from scratch. I designed the system architecture, defined the development road-map, and coordinated with the business side. The system is designed into several micro-services and can scale up dynamically based on system loading. We also build up a fully automatic CI/CD pipeline that including code lint, document generation, unit/regression test, and deploys the system to the Kubernetes cluster.

System Architect and Administrator:

Built-up and maintaining the infrastructure of research architecture, including set up parallel computing resources by utilizing Slurm, created a distributed shared file system for data storage, and help to purchase equipment. Brings the concept of continuous integration/deployment and monitoring to the company, which reduces the error caused by manual deployment. And I also implement an alert dispatch system that reduces the reaction time from hours to a few minutes when an error occurred.

Trading Strategy Development:

Implemented and co-worked in several trading strategies, which include event-driven strategy and high-frequency trading strategy. Designed and implemented a simulation pipeline tool that can optimize the strategy's hyper-parameters based on customized objective functions and rules. Also involved in the whole trading pipeline, including infrastructure, trading, and research.

Web Development:

Implemented a GUI for a trading system that can help traders change the parameter dynamically. Designed and built a web application for a customer accessible portfolio dashboard. And I also created numerous in-house tools to visualize strategy performance, monitoring cluster status, and so on.

2016/09 - 2018/02

Unix System Manager, National Taiwan University

Maintained more than 25 Unix workstations, numerous web services, and mail server. During service, I migrated mail service from Postfix mail server to Google G-Suite and achieved zero downtime. Moreover, I built a multi-server GPU status monitor and an automatic notification system that can notify the administrator when something went wrong on any workstations.

2015/09 - 2016/08

Full Stack Web Developer, Dcard Taiwan Ltd.

Developed and maintained both the front-end website and back-end API server that have more than hundreds of thousands daily active users, increased registration rate by refining registration flow. Built a new version of the website and administration dashboard/panel using modern web framework React.js and migrated the database under 12 hours downtime using Golang.

2015/02 - 2016/08

Adjunct Research Assistant, National Chengchi University

Worked on computer graphic project, designed novel algorithms for image stylization and assisted with paper writing, providing supplementary materials and giving research speech at conferences.

EDUCATION

2016 - 2018

Master of Science, National Taiwan University

- Major in Information Management (Overall GPA: 3.7/4.3)
- Thesis: Transferring Deep Reinforcement Learning with Adversarial Objective and Augmentation
- Advisor: Prof. Bing-Yu Chen

2012 - 2016

Bachelor of Science, National Chengchi University

- Double major in Computer Science and Management Information Systems (Overall GPA: 4.0/4.3)
- Advisor: Prof. Ming-Te Chi

PUBLICATIONS

- [1] **S.-H. Hsu**, I.-C. Shen and B.-Y. Chen. Transferring Deep Reinforcement Learning with Adversarial Objective and Augmentation, *arXiv*, 2018
- [2] Y.-C. Wu, **S.-H. Hsu**, M.-T. Chi and W.-H. Liao. 2.5D stylized application using anisotropic reaction-diffusion, *SIGGRAPH ASIA Posters*, 2016
- [3] M.-T. Chi, W.-C. Liu and **S.-H. Hsu**. Image stylization using anisotropic reaction diffusion, *The Visual Computer* 32 (12), 1549-1561, 2016

SELECTED SIDE PROJECTS

Coherent Line Drawing, C++, OpenCV, OpenMP, WxWidgets

- Create line drawing styled image from photography by using flow based difference of Gaussian. With an easy-to-use, real-time interactive GUI.
- 300+ Stars and 30+ forks on Github. Code can be found at <https://github.com/SSARCandy/Coherent-Line-Drawing>

Deep CORAL, Python, PyTorch

- Implementation of 'Deep CORAL: Correlation Alignment for Deep Domain Adaptation.', ECCV 2016
- 100+ Stars and 20+ forks on Github. Code can be found at <https://github.com/SSARCandy/DeepCORAL>

Image stylization using anisotropic reaction diffusion, C++, OpenCV, OpenMP, WxWidgets

- Create stylized image by using reaction-diffusion model and novel thresholding method.
- Code can be found at <https://github.com/cglabnccu/stylizationRD>

HONORS

- **Honorable Mention**, Computer Graphic Workshop, TAIPEI ACM SIGGRAPH 2018
- **1st Place**, Social Network Application Contest, National Chengchi University 2014
- **2nd Place**, Academic Excellence Award, National Chengchi University 2014
- **Honorable Mention**, Computer Graphic Workshop, TAIPEI ACM SIGGRAPH 2014

SKILLS

- LANGUAGES: Chinese (Native), English (Fluent)
- COMPUTER LANGUAGES: JavaScript [5+ years]; Python [3 years]; C++ [2 years]; Shell [2 years];
- DEVOPS/TOOLS: Docker, Kubernetes, GitLab Runner, Jenkins, Prometheus, Grafana, AWS, GCP