Yanning Chen

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Education

Shanghai Jiao Tong University (SJTU)   Sept. 2019 - June. 2024 (expected)

- Shanghai, China
- Bachelor of Computer Science
- GPA 83.5 / 100, Ranking 42 / 110 (first 2 years)

Projects

Meta Programming Theories in Functional Languages   Apr. 2020 - Mar. 2021

Research Participation Program   Research on formal semantics of meta programming in functional languages.

- Formalized the semantics of *lambda calculus with constructors* in *Coq*.
- Proved the *simulation* relation between meta programs and object programs.
- *Automatic synthesis* of meta programs and *proof construction* of simulation from program to meta-program by *Ltac*.

SimPL Interpreter   May. 2022 - June. 2022

Course Project   An interpreter for an ML-like language.   [Code]

- Defined the operational semantics and typing rules of a simplified dialect of *ML*.
- Lazy & eager evaluation and hindley-milner type inference using algorithm W.
- Copy garbage collection.

RBAC support for TiKV PD   Sept. 2020 - Dec. 2020

Mentee   A Linux Foundation mentorship program.   [Proposal]

- Proposed a design to add *role based access control* for *TiKV PD* cluster.
- Implemented an initial version of *RBAC* support for *TiKV PD*.

Experience

Shanghai Jiao Tong University Linux User Group   July. 2020 - Present

Maintainer   A joyful techie user group in SJTU. Maintains a mirror service and a LaTeX template.   [Website]

- Leader of *SJTUG* since Mar. 2022.
- Responsible for maintaining *Archlinux* and *ghcup* repositories.

Stargazer   Apr. 2020 - Present

Collaborator   A full-stack, flexible social media account tracking system.   [Code]

- Designed a distributed architecture to provide a scalable, high-performance, and highly available solution.
- Developed message delivery and worker scheduling components built on top of *MongoDB*, *RabbitMQ* and *Kubernetes*.

SJTU Plus   Sept. 2020 - Present

Maintainer   A student organization in SJTU that aims at providing online utilities for SJTUers to make their life easier.   [Website]