ETHAN HUANG

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PROFESSIONAL EXPERIENCE

Supermicro | **Software Engineer** | **San Jose, CA**   11/2023 - Current

Full Stack Development

- Develop and optimize 10+ mission-critical services using TypeScript, React, Express, GraphQL Apollo, and REST APIs within a distributed system architecture, delivering robust, scalable, and user-friendly applications.
- Manage and optimize databases including MariaDB, MSSQL, Cassandra, and ScyllaDB, and maintain event-driven communication with Kafka, ensuring seamless integration and high performance across distributed system components.
- Reduce operational overhead by 50% on the global production lines by delivering custom features and hot fixes.
- Refactor legacy codebases, increasing test coverage to 97%+ with Jest, significantly improving code maintainability and reliability.
- Boost GraphQL performance by 95%, optimizing data fetching and reducing latency for better user experiences.
- Orchestrate multi-cluster data operations, including synchronizations, migrations, and disaster recovery for 2 TB of data using Rook-Ceph, MariaDB-Galera, and Bash scripting, ensuring high availability and resilience.

DevOps and Infrastructure

- Bootstrap and manage 20+ highly available, multi-region on-premises Kubernetes clusters, automating bare-metal provisioning with Ansible and ensuring network reliability with HAProxy, Kube-VIP and Nginx.
- Spearhead the adoption of ArgoCD and GitOps as the project owner, leading its implementation and optimization to manage 10+ applications across 20+ Kubernetes clusters, improving deployment efficiency by 90%.
- Design and establish CI/CD pipelines with ArgoCD, DroneCI, Helm, and Kustomize, enhancing maintainability, scalability, and developer productivity by 50%, while showcasing deep expertise in Kubernetes and its ecosystem.
- Enhance system observability by configuring Prometheus for metric collection and Grafana for visualization.
- Construct multi-purpose containerized environments with Docker Compose, reducing setup time by 60% and optimizing image sizes by 80%, significantly boosting efficiency and resource utilization.
- Mentor team members on GitOps best practices, fostering collaboration and technical excellence.

NavisX-AlluringSelf (Startup) | **Software Engineer** | **Remote**   3/2023 - 10/2023

- Developed a web application with 20+ custom React components, leveraging Next.js 13, TailwindCSS, Typescript and Zustand.
- Led the technical team at an early-stage startup, driving rapid product iterations in a dynamic environment.

EDUCATION

Cornell Tech, Cornell University   2022

Master of Engineering in Computer Science | GPA: 3.5 | Merit Scholarship   New York, NY

University of California - San Diego   2021

Bachelor of Science in Computer Science | GPA: 3.94 | Provost Honors   La Jolla, CA

PROJECTS

ethanhuang.dev | AWS EC2, Amplify, Next.js 14, React.js, Typescript, TailwindCSS, MongoDB, Docker

- Built a personal portfolio and blog website with features including server-side rendering, enhanced SEO, optimized performance, dark mode, and responsive design, hosted on AWS.

CryptoArb | C++, STL, SQLite, Docker, CMake, OpenSSL

- Developed a crypto arbitrage system using graph algorithms and data analysis to identify profit opportunities and mitigate risks.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Bash, SQL, C++, Lua

Frameworks & Libraries: React, Next.js, Node.js, Express, GraphQL, Apollo Server, Jest, TailwindCSS, C++ STL, Pandas, NumPy

Infrastructure, DevOps & Cloud: Kubernetes, Docker, AWS (EC2, Amplify), ArgoCD, DroneCI, Prometheus, Grafana, Ansible, Helm, Kustomize, Kafka, Nginx, HAProxy, Rook-Ceph, Syncthing, Vagrant, Etcd, YAML

Databases: Relational (MSSQL, MySQL, MariaDB, SQLite), NoSQL (Cassandra, ScyllaDB, MongoDB), Redis

Developer Tools: Git, GitHub, GitLab, SSH, Make, Postman, Virtual Box, Hyper-V, Neovim, Tmux