Guanchao Huang (Samuel)

South Bend, IN | (574) 329-2495 | hi@sghuang.com
LinkedIn: in.sghuang.com | GitHub: git.sghuang.com | Website: sghuang.com

OBJECTIVE

Develop software product that empowers people. Proven development and product/project management skills demonstrated in high-impact projects, with a track record of quickly adapting to new domains and technologies and agile philosophy. Proficient with tech stack including Next.js, React, Vue, Tailwind CSS, MongoDB, Python, Git.

EDUCATION

UNIVERSITY OF NOTRE DAME (ND)   Notre Dame, IN
Master of Science in Computer Science and Engineering | GPA 3.722/4.000   Aug. 2023 – May 2025

SOUTHERN UNIV. OF SCI. & TECH. (SUSTECH)   Shenzhen, Guangdong, China
Bachelor of Engineering in Microelectronics Science and Engineering | GPA 3.69/4.00   Sep. 2019 – Jun. 2023

EXPERIENCE

MYTICKETS   Notre Dame, IN
Software Engineer, Fullstack   December 2024 – Present

- Joined as the **third developer**, contributing to the development of a Next.js web application and React-based admin dashboard. The platform is currently supporting 800+ users and generating $19k+ revenue per month.
- Played a key role in shaping the **technology roadmap** and **system architecture**. Proposed and implemented a normalized database design to ensure consistent data types and simplify the development process, alongside introducing Prisma ORM for streamlined database services, type systems, and APIs.
- Designed and implemented end-to-end development processes, including a **CI/CD pipeline** (GitHub bot, ESLint, Prettier, Vercel), API and UI testing systems, and a Notion-based **project management** system adopted across the team. Recognized by the CTO as the "**process guy**" for streamlining workflows.
- Tech Stack: Next.js, Headless UI, MUI (dashboard), TypeScript, Tailwind CSS, Prisma ORM, Vercel, MongoDB, Zustand, Tanstack Query, Stripe, Twilio.

KINGA SAFETY   South Bend, IN
Product Manager & Software Engineer   July 2024 – October 2024

- Conducted code reviews for existing codebase, leading to the decision to onboard a new developer; sourced and interviewed new developer, and provided technical insights for the team.
- Re-developed Kinga with React Native. Kinga is a personal safety app with features like decoy call and emergency texts. Served as Product Manager to ensure the development aligns with business needs.

ENFOCUS   South Bend, IN
Summer Intern – Tech Consulting, Data Analytics   May 2024 – July 2024

- Analyzed real-time trip data from 800+ users collected over the past 4 months, including GPS telemetry, demographics, treatment impact, and survey results. Delivered insights to inform future protocol design and recommended the creation of an in-house data science team.
- Developed a 12-page real-time dashboard using PowerBI, ArcGIS, and Azure to monitor user performance in the program. The dashboard provided key insights for the pilot program and received client endorsement.

BLEWBO   Shenzhen & Dongguan, Guangdong, China
Market Research Engineer – Business Development & Operation   June 2023 – September 2023

- Pioneered Blewbo's business expansion into the Chinese market as the **first employee**, directly handling all aspects of business development and setting the foundation for the company's operations in the region.
- Facilitated business communication during the executive's travel in China, acting as an interpreter and ensuring smooth business operations through cultural and strategic insights.
- Conducted supplier sourcing by identifying and finalizing business agreements with 4 factories.
- Operated the hiring process for the China launch, posting jobs, screening applicants, and coordinating interviews, ultimately recruited a Product Photographer and an HR Specialist from over 150 candidates.

COOPERATIVE COMPUTING LAB, ND   Notre Dame, IN
Visiting Student Researcher – Software Engineering   May 2022 – Jul 2022

- Collaborated with CCL research team, enhancing the open-source HPC computing toolkit using C and Python. Utilized Git and GitHub for version control, and Linux Shell script to streamline workflow.
- Developed a transaction log visualization tool with Python that diagnosed performance bottlenecks in the distributed computing system, which became an integral tool for subsequent research projects.
- Implemented a mechanism to reduce the number of distributed workers without compromising task progress, resolving a long-standing functional request from 2016 and optimizing the system's flexibility and efficiency.

ENTREPRENEURSHIP

- **Co-Founder** at **TALENTOS UNIDOS**: Building a web app with a WhatsApp chatbot to collect job seeker info and a frontend for HR to filter the candidates. Tech stack includes Twilio, Bun.js, MongoDB, React, XState, JavaScript. This idea won a **Top 3 award** in the pitch competition at Princeton University.

ACADEMIC & PERSONAL PROJECTS

- [Hexagram](): A React-based web tool for exploring and interpreting the 64 Chinese hexagrams. (August 2024).
- [Climate Change Sentiment Analysis on Reddit](): Led a 3-student team to analyze 460k Reddit comments related to climate change using Jupyter Notebook, Pandas and various data science tools (May 2024).
- [Compiler for B-Minor](): A compiler for B-Minor 2023, a C-like language that includes expressions, basic control flow, recursive functions, and strict type checking, crafted in C for Intel x86 platform. (December 2023)
- [UniTuring](): A Python-based UTM emulator capable of reading and executing computations on provided Turing machine tapes, complemented by a text interface that showcases the execution progression. (April 2022)
- [ARMv3 Processor with Multiplier](): A processor written in Verilog, compatible with several basic ARMv3 arithmetic instructions and multi-cycle multiplication, simulated and tested in Vivado. (October 2021)
- [Image Steganography + Hamming Codec](): Led a 2-student team in developing a Python tool for data embedding within images with Hamming encoding/decoding and LSB manipulation. (May 2021)
- [Matrix Library and Strassen Algorithm](): Led a 4-student team in developing a custom Python matrix library, incorporating basic operations and the Strassen multiplication algorithm. (December 2020)

OPEN SOURCE

Core Team Member of [NexT](), a popular theme for the Hexo static site generator with over 26k stars across three repositories. Developed and maintained key features; my personal website is built using this theme.

Maintainer of [SUSTech Application Wiki](), maintaining this database of posts from alumni. Also developing a [new version of the website]() using Nuxt.js, Vue.js, Naïve UI, Tailwind CSS, for an improved UI/UX.

Author of Slidev addons. Developed and published Slidev addons that integrate existing component libraries into this presentation framework. Built with Vue.js, Vite, and UnoCSS, these addons are available on the [NPM registry]().

LEADERSHIP & SERVICE

UNIVERSITY OF NOTRE DAME   Notre Dame, IN

- **Student Recruiter:** Initiated the Ambassador Program in the College of Engineering, collaborating with admission office to establish a trained ambassador team. Recruited for grad school at multiple conferences.
- **Dept. Representative, Grad. Student Gov.:** Represented CSE Dept. in GSG meetings.
- **Interim President, Computer Club (ACM):** Reviving the organization to promote professional development and increase CSE student engagement in campus startups, coordinating events and partnerships.

SOUTHERN UNIVERSITY OF SCIENCE AND TECHNOLOGY   Shenzhen, Guangdong, China

- **Founder and Moderator of Python User Group:** Improved technical skills and problem-solving abilities for 350+ members. Additional workshops are currently being planned.
- **Student President of School of Microelectronics**: Organized events, assisted administration.

Hobbies: Singing (tenor in Notre Dame Chorale); Personal Productivity; Calligraphy; Philosophy.