ChengLiang Qian/Mick

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Proficient Software Engineer, interested in AIGC/Music, skilled in competitive programming/engineering

Awards & Achievements

- **Honorable Mention, Huawei Hackathon, Oct. 2021** Subject: Memory reuse-relation of Tensor

- **Honorable Mention, MIM/ICM, Feb. 2018**

- **Zhejiang University Second-class and Third-class Student Scholarship, 2018 & 2019 & 2020** Awarded to Top 10%/15% students in previous semester

- **Outstanding Engineer Of The Year Award, 2021** Awarded to the outstanding engineer(among 1000+ engineers) of Hangzhou Institute for the designing and implementing a high-performance text-editor

Work Experience

- **Huawei Tech**   Hangzhou Research Institute
  Engineer I   *July. 2020 - Aug. 2021*
  Engineer II   *Aug. 2021 - May. 2023*
  Senior Engineer   *May. 2023 - Present*

  - **LLM-powered Agent**: An virtual agents-team with specialized abilities, playing different roles in SAP, collaborating together, aiming to create an independent code project. While doing research into popular LLM-powered Agent frameworks, became a contributor of **Auto-GPT**.
  - **Pangu LLM**: An LLM based on transformer architecture. Fine-tuned on code data to enhance its abilities in coding. Responsible for model engineering
  - **Auto-regressive Music Generator**: A transformer-based DL model, aiming to generate music. Inspired by Music Transformer, it can generate music from image/genre/prompt.
  - **Java-to-Scala Transpiler**: A Java-to-Scala transpiler written in Scala, aiming to translate legacy java code into usable Scala code. Pioneered the progress of the project. Based on JavaParser & Scalameta, it out-performs most of the j2s transpiler at the time.
  - **Slang**: A System-Verilog parser written in C++, which parsing System-Verilog source code into Syntax Tree, while generating proper diagnostics. It also exploits advanced skills to boost performance, including CRTP. Hand-written filelist parser boost its performance 100+ times.
  - **VNext**: A cross-platform, blazing fast and lightweight IDE written in Rust. Built on a Rust GUI framework - Druid, which can be compiled into WASM, it have the same behavior under many platforms. Led and built a pure hand-written Rust Text-Editor. While providing abundant features supported by popular IDEs, it also runs with high responsiveness and low memory -consumption.

Education

- **Zhejiang University (ZJU)**   Hangzhou
  Bachelor in Computer Science; Cumulative GPA: 3.85/4.00, Major GPA: 3.98/4.00   *Oct. 2016 – July. 2020*

Skills & Stacks

- **Machine Learning**: ML Ops, ML Coding, ML Theory

- **Languages**: Rust, C++, Java, Scala, Python

- **Technologies**: Druid, Flutter, JVM, Text Editor, Gradio, LLM-Agent

Relevant Coursework

- **Major coursework:** Calculus I-II, Matrix Theory, Computational Theory, Discrete Mathematics, Computer Network, Digital Integrated Circuit Design, Computer Architecture, Computer Organization and Design, Operating System, Compiler Theory, Software Engineering, Probability Theory, Database System, Basic and Advanced Data Structures and Algorithms

- **Minor coursework:** Communication skills towards IT, Artificial Intelligence, Software Engineering, B/S system Software Design, Java Application,E-commerce System Architecture

- **Online courses:** Coursera: Deep Learning Specialization, DeepLearning.AI: How Diffusion Models Work, Building Generative AI Applications with Gradio, LangChain for LLM Application Development, etc

Personal Interest

- **AIGC:** Focusing on recent AI products, understanding their use-cases and principles. Contributor of Auto-GPT

- **LeetCode:** LeetCode Contest Knight Badge, Rating 2100+

- **Kaggle:** Competitions Expert, 6th and 14th in playground series

- **Music:** A music fan, heavy user of Apple Music(at least 1 day per week). Interested in Blues, Rock, Bossa-nova, especially Britpop.