NG YI XUAN

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EDUCATION

National University of Singapore	2023.08 – 2025.01
Master of Computing (General Track) - School Of Computing	Singapore

Courses: Computer System And Applications, Data Structures And Algorithms, Computer Performance Analysis

Communication University of China	2019.09 – 2023.06
Bachelor of Digital Media Art (Network and Smart Media Design) - School of Animation and Digital Art	Beijing, China

GPA: 3.78/4.00

Courses: Human-Computer Interaction Technology, Information Visualization Design, Fundamentals of Website Programming

PROFESSIONAL EXPERIENCE

- 3 years of frontend development experience, contributing to 10+ projects in Web3, finance, internet, and education domains.
- Proficient in MVVM frameworks like React.js and Vue.js, capable of independently developing components and managing frontend routing. Skilled in JavaScript, TypeScript, HTML5, and CSS3, with experience in CSS preprocessors like SCSS and LESS.
- Experienced in configuring and using ESLint and Prettier to ensure code quality and consistency.
- Experienced at API interactions with GraphQL and RESTful APIs, capable of using Axios, TanStack Query for data fetching and caching.
- Capable of using data visualization tools such as Recharts, Echarts, D3.js, and Tableau for creating dynamic and interactive charts.
- Skilled in frontend debugging tools like Chrome DevTools, Apifox, and Postman for efficient debugging and troubleshooting.
- Effective cross-department collaboration skills; experienced in working with UI/UX designers and backend engineers. Familiar with design tools like Figma and Adobe XD to translate designs into efficient and user-friendly implementations.
- Contributed to open-source projects, including Onlydust's Speedrun & Scaffold Stark, earning rewards for contributions.

INTERNSHIP EXPERIENCE

Quantum3 Labs Pte. Ltd	2024.01 – 2024.10
Web3 Fullstack Developer	Singapore

- Contributed to frontend development of projects like Stormbit and The Marquis, using React and Next.js to design responsive layouts with TailwindCSS and build reusable component libraries and custom hooks.
- Built parameterized Query and Mutation logic, combining GraphQL schema type definitions and dynamic variables to support pagination, conditional queries, and data updates. Integrated with Apollo Client for efficient cache management. For example, implemented precise filtering of user transaction records based on time range, amount range, or transaction type, and used nested queries to aggregate user asset information and statistics.
- Encapsulated custom hooks with TanStack Query to optimize API calls. Configured query keys, query functions, enabled states, and data expiration times to automate data refetching, reducing the complexity of manually managing asynchronous data.
- Integrated the third-party email service Mailgun API using the mailgun.js library, designing and maintaining efficient API endpoints with role-based access control. Implemented features such as email subscriptions, email template management, and scheduled email sending. Also generated detailed API documentation through Swagger, providing users with email notification services.
- Actively participated in the development and prototyping process of the company website and various platforms, driving the project's efficient implementation during requirement analysis, design reviews, and development stages.

Beijing Zhongjia Interactive Entertainment Co. Ltd	2022.05 – 2023.05
Uniapp Frontend Developer	Beijing, China

- Developed and maintained a WeChat Mini Program for a script-killing game using UniApp and Vue. Designed and developed highly reusable custom components, and built responsive user interfaces adaptable to multiple platforms by combining uView UI and TailwindCSS. Customized the TailwindCSS configuration file to define design systems such as colors, spacing, and typography, ensuring interface consistency.
- Encapsulated an HTTP request tool to dynamically handle request configurations across Mini Program, APP, and H5 environments, ensuring flexibility to meet platform-specific requirements. The tool implemented request and response interceptors for automatic handling of authentication, error processing, and data validation, while also supporting request retries, which improved system stability and user experience. Additionally, it integrated file upload and download functionalities.
- Configured global navigation guards in Vue Router and combined them with Vuex state management to dynamically sync and update user login status and access permissions. It adjusted route access control based on user roles and redirected users to specific pages, ensuring appropriate permission control and page guidance for different user roles in various access scenarios.
- Migrated an internal management platform from Vue2 to Vue3 based on the Vue Vben Admin framework. Rewrote JavaScript code to TypeScript and added new functional modules based on interface requirements, such as managing scripts, players, and activities.

PROJECT EXPERIENCE

Bitchange – Cryptocurrencies trading platform   2024.09 –2024.10

BitChange is a cryptocurrencies trading platform aimed at providing users with simulation services for digital asset management and trading. The platform includes features such as user registration and login management, wallet creation and multi-wallet management, transaction record tracking, and transfers between different wallets, while also supporting easy cryptocurrency exchange and asset transfers.

Tech Stack: React, Next.js, Typescript, Java, MySQL, MongoDB, Docker

- As a core front-end developer, I used Next.js and TypeScript to build an efficient and maintainable front-end architecture, significantly improving development efficiency and code quality. The architecture adopted a modular development approach, and I implemented flexible state management using reusable components and the React Context API.
- Wrote Python scripts to call the Binance and CoinMarketCap APIs to fetch real-time USDT trading pair data. The script integrated data extraction to map token symbols to corresponding image URLs, which were then saved as JSON files for displaying token icons and symbols in the trading pair list.
- Integrated the InfiniteScroll component into the page to optimize performance through on-demand loading and lazy rendering. By setting an appropriate data request size per query, I effectively controlled the frequency of network requests, avoiding page lag caused by loading a large amount of data all at once, and implemented smooth loading animations using react-spinners.

Stormbit – P2P Staking and Lending Platform   2024.02 –2024.07

Website: https://stormbit.finance/

Stormbit is an innovative lending protocol designed for complex financial operations in the digital asset space. It leverages verifiable data to achieve advanced risk assessment and customized lending agreements. Its unique advantages include the integration of zkTLS technology to securely bridge Web2 and Web3 data, providing more accurate analysis capabilities for credit risk assessments. The platform supports various lending models, ranging from P2P lending to institutionalized lending.

Tech Stack: React, Next.js, Typescript, TailwindCSS, Hardhat, Solidity

- Used hooks such as useScaffoldContractWrite and useScaffoldContractRead from the Scaffold ETH framework to call smart contract methods. Dynamically loaded the contract ABI for different chain environments, ensuring compatibility with the deployed contract version. Used decodeEventLog to parse contract events and extract critical information about the lending pool.
- Seamlessly migrated the project's database from MySQL to PostgreSQL. During the migration process, I addressed compatibility issues with data types, optimized indexing, and standardized the handling of timestamp data types.
- The platform currently has approximately 2,000+ monthly active users, primarily from the DeFi industry and social media marketing campaigns. The number of registered users grew by about 15% in the past month.

RateCorner – NUS Course Evaluation Platform   2024.02 – 2024.06

Website: https://ratecorner.org/

The course evaluation platform is designed to provide students with a space to publish, browse, and manage course evaluations. Leveraging the university's open API, the platform retrieves real-time updates of the latest course list. Students can rate courses based on their personal learning experiences, evaluating teaching quality, workload, and difficulty. They can also provide textual feedback to share the strengths, weaknesses, or suggestions for improvement of courses.

Tech Stack: React, TypeScript, Material UI, Java, MySQL

- Designed utility functions such as decoding and validating JWT Tokens. Used jwtDecode to decode the provided token and automatically clear local storage when the token expires. Combined with a backend validation mechanism, this approach double-checks the token's signature and validity.
- Created a theme management component for the application, enabling users to persist their theme preferences in localStorage. Using ThemeContext, the platform provides dynamic theme switching functionality. Combined with Material-UI's ThemeProvider, this implementation ensures uniform application and switching of different theme styles across the entire app.
- Managed the display of the sidebar and user information using SidebarContext and UserContext. Implemented a responsive sidebar using Material-UI's Drawer and Box components, supporting features such as displaying user avatars and email addresses, along with dynamically rendering menu items. Sidebar menu items include personal information, password updates, user ratings, and bookmarks. With Material-UI's theme breakpoint properties, the sidebar is adapted to different screen sizes.
- The platform has surpassed 1,000 registered users, with students from various colleges of the university. Among them, computer science students account for approximately 40%, making them the most active user group.

CONTACT

Personal Website: https://ngyixuan.github.io/
LinkedIn: https://www.linkedin.com/in/ngyixuan/
Github: https://github.com/ngyixuan