Jiaxuan (Robert) Zhang

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EDUCATION

Johns Hopkins University   Baltimore, MD
Combined BS/MS in Computer Science (GPA 3.79/4.00)   *Aug. 2019 – May 2024*
Distinctions/Positions: Dean's List, Course Assistant for Full-Stack JavaScript and Functional
Programming in Software Engineering, JHU ACM System Admin
Relevant Coursework: Compilers, Principles of Programming Languages, Functional Programming in
Software Engineering, Full-Stack JavaScript, Intro Algorithms, Open Source Software Engineering

SKILLS

Languages: English (native/bilingual proficiency), Chinese (native/bilingual proficiency)
Programming Languages: JavaScript, TypeScript, OCaml, ReScript, C, C++, Rust, Java, SQL
JavaScript Ecosystem: React.js, Next.js, Node.js, Babel, Rollup, webpack, Redux, GraphQL, Express.js, Tailwind CSS
Tools/Databases: Git, Linux, NPM, Yarn, Vim, AWS, Docker, MySQL, PostgreSQL, MongoDB
Areas: open source, programming language theory, DevOps, Android

EXPERIENCE

Software Engineer Intern   May 2022 – Aug. 2022
Meta @ React Core (reactjs.org)   *Menlo Park, CA*
- Shaped the future of React by contributing to React Forget, an experimental auto-memoizing compiler that eliminates manual usage of `useMemo` and `useCallback`. Implemented pretty printers for compiler intermediate representations (IRs). Optimized compiler debug outputs like dependency graphs through immutable snapshots.
- Created and owned the React Forget Playground, a compiler explorer showcasing the compiler output and IRs and a REPL with interactive examples. Introduced live-rendered preview from multi-tabbed Playground input, dependency graph visualizations, code size comparison with/without Forget, etc. Playground is the gateway to React Forget and a general educational tool for React, and is irreplaceable in internal discussions on the compiler.

Tech Lead   Jan. 2021 – Present
uCredit (ucredit.me)   *Baltimore, MD*
- Founding member of uCredit, a shareable and accessible degree planning platform for JHU students and faculty.
- Lead design and implementation of frontend. Utilize Next.js, TypeScript, Redux, Tailwind CSS, etc.
- Implement backend with TypeScript and Express.js. Cache course data fetched from university API with MongoDB. Implemented university OAuth login with Passport.js.
- Host weekly office hours (2-3 hours/week) for entire team to help resolve technical questions.

Full-Stack Development Intern   May 2021 – Aug. 2021
ByteDance (TikTok) @ Web Infra (webinfra.org/en/about)   *Beijing, China*
- Built frontend for Mobile DevOps platform. Supported 50+ teams with customizable event alerts, webhooks, etc. Attained ~500 daily active users. Refactored Redux and routing logic into custom React hooks and refurbished UI.
- Utilized React.js, TypeScript, Redux, webpack, Tailwind CSS, etc. Implemented backends for frontends, micro services, and micro frontends.
- Maintained Modern.js (github.com/modern-js-dev/modern.js), the open source meta-framework supporting 1100+ apps at ByteDance. Added internationalization to CLI.
- Interviewed guest speaker Dan Abramov, React Core team member, on the release of React 18, while co-hosting event for team and public. Compiled and selected questions collected from 5000+ live audience.

OPEN SOURCE PROJECTS

Lyte, Author | *TypeScript, Rollup, Babel, Storybook, Tailwind CSS, NPM*   May 2022 – Present
- Created Lyte (github.com/robertzhidealx/lyte), a collection of highly extensible React components, including Selectable, a beautiful (multi)select dropdown component.
- Added full TypeScript support, comprehensive documentation, and dark mode.

LytePQ, Author | *JavaScript, Rollup, NPM*   Jul. 2021 – Present

- Created LytePQ (github.com/robertzhidealx/lytepq), a concise and highly performant JavaScript data structures library packaging a priority queue, disjoint sets, etc.
- Added full TypeScript type declarations, comprehensive JSDoc annotations, full-spectrum unit tests, and linting.