

# KHINSHAN KHAN

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## Work Experience

### Kiip, PBC

SENIOR SOFTWARE ENGINEER

Brooklyn, New York

Dec. 2022-Present

FOUNDING SOFTWARE ENGINEER

Dec. 2021-Dec. 2022

[kiip.io](#) and [kiip.co](#) (AWS Lambda, S3, DynamoDB, Chime, GraphQL, Next.js, MobX, Javascript, Typescript)

Kiip allows people to store digital copies of vital documents and share them in interactive data rooms when applying for services offered by the city or other public benefits and service providers, easing any potential times of crisis or extenuating circumstances.

- **Established Kiip's core infrastructure**, setting up AWS services, DNS management, CI/CD pipelines, and Typescript migration. This foundation streamlined development and supports scalable growth, reliably serving a rapidly expanding user base.
- **Translated complex user and client pain points** into product feature specifications, meticulously **aligned with business objectives**, and executed robust scalable backend systems with **WCAG-compliant reusable React components** for scalable intuitive user interfaces.
- Engineered and launched a **`zero-knowledge' encryption service**, complemented by scalable and intuitive **WCAG-compliant React components**, significantly enhancing data privacy and user experience, and improving platform trust among at-risk populations.
- **Developed sophisticated authorization models**, tailoring user access and permissions, which played a critical role in the platform's capacity to provide secure and personalized document management services.
- **Distilled complex technical concepts** to stakeholders through engaging demonstrations, using visual aids to illustrate Kiip's unique value proposition. These initiatives were instrumental in securing pivotal partnerships and facilitating funding rounds.
- **Nurtured a culture of innovation and continuous learning**, championing 'brown bag' sessions that equipped the team with the latest best practices and tooling, directly accelerating feature development and team proficiency.

### Two Bulls

SOFTWARE ENGINEER

Brooklyn, New York

Jan. 2020-Jan. 2022

**Port Management Tool** (AWS Lambda, S3, DynamoDB, PostgreSQL, Golang, Typescript, React, Leaflet, Material UI, Node.js)

Working with [Seacor Holdings](#), several of their ports now have ship detection and corresponding port events handled and searchable automatically via this tool and added to billing for [Helm Operations](#) orders for cross-examination and detailed view of ships' paths.

- Negotiated and led agreements with data providers to create new APIs and selectively clean noise, handling **1,000,000+ daily AIS messages**, as well as agreeable TTL policies for caching vessel particulars with custom round robin scheduled refetching data.
- Designed and implemented a resilient microservice architecture, transitioning databases to improve scalability and system performance.
- Spearheaded aspects of the **`complex event processing'** algorithm with machine learning and heuristics, capturing and categorizing new vessels and interesting geofences leading to higher accuracy port events for precise billing and reporting.
- Created a client-facing port call search tool with **interactive vessel path visualization**, markedly improving the user experience and strategic decision-making.
- Initiated internal algorithm visualization tool, allowing playback of **100,000+ records as a smooth animation** for advanced debugging.

**Mailchimp Firebase Integration** (Typescript, Firebase, GCP, Mailchimp)

A groundbreaking extension bidirectionally synchronizing between Firebase and Mailchimp, enabling advanced user data integration for personalized marketing campaigns. Showcased at Google I/O 2021 and **presented at Google I/O 2022**, extension was [open sourced](#) by [Mailchimp](#).

- Headed initial development of the alpha Firebase extension, achieving **3.4k+ integrations** post-launch, demonstrating widespread adoption and easing integration for Mailchimp's suite of marketing tools.

## Notable Projects

**Emoji Helper** (Typescript, Mdash, Hast, Pnpm, Changelog)

[GitHub Link](#)

Monorepo of packages [published on NPM](#) with **600+ downloads** for custom emoji manipulation and utility, designed framework agnostic.

- **emoji-helper-core**: defines a strongly typed emoji dataset for projects adaptable to platforms like Discord, Slack, GitHub.
- **emoji-helper-remark**: markdown plugin to convert `:emoji:` inline into JSX components, allow fully customizable representations.
- **emoji-helper-pack-github**: curates GitHub's emojis readily usable out of the box for consistent rendering across applications.

## Community

**Ep 1: Authentication and Authorization**, Guest

[Spotify Podcast Episode Link](#)

Discussion delving into topics like **Federated Login, SSO, JWTs**, and best practices in a server with **160k+ members**.

**TPH Tech Spotlight: What is Tailwind?**, Spotlight Leader

[Posterity Write-up Link](#)

Help programmers learn and explore TailwindCSS, whether they've written 10 lines of code or have been coding and programming for 10 years.

## Education

**Hunter College, City University of New York** BACHELOR IN COMPUTER SCIENCE, MINOR IN MATHEMATICS

New York, NY

**Stuyvesant High School** ADVANCED REGENTS DIPLOMA WITH HONORS

New York, NY