KHINSHAN **KHAN**

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Skills

Languages	Typescript, Javascript, Golang, Python, HTML, CSS
Frameworks	React.js, Next.js, Gatsby.js, Chakra UI, Material UI, Express.js, Flask
Environments	AWS, Netlify, Digital Ocean, tRPC, GraphQL, Rest, DynamoDB, PostgreSQL

Work Experience

Kiip, PBC
Brooklyn, New York

SENIOR SOFTWARE ENGINEER — *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
Brooklyn, New York

SOFTWARE ENGINEER — *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.

Freelance (Self employed)
Queens, New York

SOFTWARE ENGINEER — *Jan. 2019-Jun. 2019*

NDA clients (*Python, Flask, Javascript, HTML, CSS*)

Beginning my career beyond just academic and open source, I sought out clients in the community for a hands-on approach to transition theoretical knowledge into practical solutions, directly addressing client challenges. It was all about getting to the heart of what they needed, crafting solutions that weren't just code, but a real enhancement to their day-to-day operations and online presence. Here are some highlights of my work:

- Developed an **automated social media management script**, enabling clients to manage postings across platforms, enhancing their digital engagement efficiently.
- Created **server-side rendered landing pages** that make it a breeze to update content and improved user interaction, significantly boosting client website performance and ease of notifications.
- Workshopped and designed a **personal branding website**, focusing on ease of maintenance for those not well-versed in web tech, ensuring it was as user-friendly behind the scenes as it was on the front end.
- Consistently achieved a **100% project satisfaction rate**, reflecting my ability to understand and execute client needs, delivering impactful and customized software solutions.

Ali & Bains, P.C.
Real Estate Intern

Queens, New York
Jun. 2016-Aug. 2016

Law Firm (*Excel, Internal Tools*)

Exploring the interest and synergy with law, I found it to be mostly mostly clerical work as the job scope. However, I helped set up power scripts to clean up inboxes and tracking out of ease and a bit of necessity.

- Drafted over 100 legal checklists, closing documents, leases, and affidavits, streamlining the transaction process for buyers and sellers.
- Managed and reconciled company escrow accounts, ensuring accurate and timely handling of client funds.
- Coordinated with attorneys, law firms, and title companies to facilitate the closure of real estate transactions.

RITNOA
Intern

Queens, New York
Jul. 2015-Aug. 2015

NDA startup (*MySQL, SAP Suite*)

This startup was business intelligence using SAP BusinessObjects and SAP HANA.

- Gained foundational knowledge in business intelligence using SAP BusinessObjects and SAP HANA.
- Learned schema design and query optimization for Microsoft SQL Server 2008, enhancing database performance.

Notable Projects

Emoji Helper (*Typescript, Mdast, Hast, Pnpm, Changeset*)   *GitHub*

Monorepo of packages published on NPM for custom emoji manipulation and utility, designed framework agnostic.

- **emoji-helper-core**: allows one to define a strongly typed map of emoji data to use in one's project from any source (Discord, Slack, GitHub)
- **emoji-helper-remark**: remark markdown transformer to replace :emoji: in text with jsx
- **emoji-helper-pack-github**: emoji pack using GitHub's assets

Kays (*Golang, PostgreSQL, Next.js, Chakra UI*)   *GitHub*

Keep **A**ll **Y**our **S**tuff: Managed Documents --- Application and API service to securely upload and automagically analyze and tag documents for insights such as similarity percentage to other documents and categorization as well as provide an optimal search experience (in progress)

Political Atlas (*React, Material UI, D3.js Python, Flask*)   *GitHub*

Map To Politics --- **data visualization** for textual (IBM Watson) versus vocal tone analysis of presidential speeches (DeepAffects).

- Managed the architecting, coding, and learning schedule for team of **3 new programmers** at a 2 week agile cadence
- Explored **webhooks, cronjobs, restful design, accessible design**, and securing VPSs with the team

Meiru   *GitHub*

WIP

Midas Menu   *GitHub*

WIP

Chrono Chime   *GitHub*

WIP

Bura   *GitHub*

WIP

Follower Integrity   *GitHub*

WIP

Potential Memory (*Flutter*)   *GitHub*

WIP

Sociaal   *GitHub*

WIP

Struo   *GitHub*

WIP

Styre   *GitHub*

WIP

Winkle Navi   *GitHub*

WIP

Rocawn   *GitHub*

WIP

red-ink   *GitHub*

Redirect and Link between discord servers made easy. Before Discord allowed cross server linking, this bot could link between servers and handle invites automagically.

Finder *(Flutter)* *GitHub*

Tinder, but for Jobs. Fiverr + Tinder.

Real Time Drawing *(React, Material UI, Express, SocketIO, Heroku)* *GitHub*

Leveraged sockets to create a turn-based real-time drawing game like skribbl.io

mcm-oss *(Python)* *GitHub*

A simple and basic operating system simulation.

Hetio Net *(Python, MongoDB, Neo4j)* *GitHub*

Simulation of Hetio Net, an integrative network of biomedical knowledge. This project populates and queries databases for relationships between compounds and diseases (relationships which aren't readily available)

- Determine the best databases based on query

OCamLisp *(OCaml, Menhir, OCamllex, Batteries)* *GitHub*

Lisp interpreter implemented in OCaml

- Allows for REPL, chaining files, varargs, persistent and overwritten-able variables, complex and nexted symbolic expressions

Movie Dex *(Javascript, Amazon)* *GitHub*

Amazon Alexa Skill to discuss and query movies from Amazon Movies

Graphics Engine: Mark II *(Python, ImageMagick)* *GitHub*

An engine to render graphics and animation scenes via a simple MDL

- Custom compiler and semantic parser to read simple MDL command scripts to export to .png or .gif files for graphics engine
- Tool transforms and animates shapes and curves, taking in preset commands with arguments or imports of .obj files
- Simulates realistic lighting and shading in a 4D space, optimized with z-buffer and backface culling

Brain Battles *(Python)* *GitHub*

Fun, brain-stimulating, exercises disguised as games. Users can connect with friends through the Team function, which allows groups of users to compare high scores and compete to be the top player in each game either across their team or worldwide

- Plan and implement reaction time game, a word search, and Simon

Dogs Ate Our Homework *(C, SDL2)* *GitHub*

A tetris game built using C and SDL2. The goal is to get the most points you can before time runs out or you reach the top of the map.

(S)hell of a Shell *(C)* *GitHub*

Shell simulation with C.

JAGDSE -- Just Another Gosh Darn Search Engine *(Python, Flask)* *GitHub*

A search engine frontend interface where you can enter a search term and select where you want your search query to go.

- Specialized for Tastedive, Google Custom Search, YouTube, News

Project Ångström *(Python, Flask, uWSGI, Digital Ocean)* *GitHub*

Scouting website for FIRST Tech Challenge (FTC) use as well as for local teams internally

- Provide statistical analysis from The Orange Alliance to allow for greater insights

Polybius *(Typescript, React, Browser Extension, Browser APIs)* *GitHub*

Enable users to create rules and have the rules automatically apply for downloads

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.

TPH Tech Spotlight: What is Emacs? , Spotlight Leader *Posterity Write-up Link*

Introduce and guide programmers to editors with a focus on emacs, answering questions ranging from lisp to packages to window management.

Miscellaneous

Interests *uptogood.dev/writings*

Blogging, cooking, linguistics, mythology, puzzles, fallacies, automation

Education

Hunter College, The 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*