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"Persist. Learn. Thrive"

ABOUT ME

I am a software engineer with some experience leading a small team to develop and maintain a lender system from scratch, where I adopt a collaborative and feedback-driven atmosphere. Together, we have consistently been able to deliver efficiently and effectively, even successfully integrating a new lender with unique requirements within a very short time frame.

I also have a proven track record of leading critical initiatives, including microservices migrations that have significantly enhanced system stability and speed. My expertise extends to security implementations and process optimizations, resulting in notable efficiency improvements.

These experiences, combined with my passion for innovation and me thriving on challenges, enables me to continue driving impactful solutions and contribute positively to future projects.

SKILLS

Queues (NSQ, RabbitMQ)
Golang
Javascript
Typescript
React / Nextjs

Svelte
NodeJS
Python
Java
Kotlin

React Native
Docker
SQL (Postgresql, MySQL)
MongoDB
Redis

WORK EXPERIENCE

Tokopedia - Fullstack Senior Software Engineer

Sep 2019 - Present

Topads

I am currently assigned to a relatively new team in the TopAds division where we are responsible for displaying ads outside the Tokopedia environment (ex: kompas.com, etc). In this team, I mainly worked with a real-time bidding system, which currently handles a few hundred RPS on average, using openRTB specification, where we dynamically bid for ad slots and display them when we won the bid.

My role in this team is to transform the current architecture so that we are able to integrate with different ad exchanges and ad types. Additionally, the architecture should facilitate experimentation with different formulas with ease so that we are able to effectively display our ads. Finally, these transformations must be done while maintaining our latency to ensure the best ad experience we can provide.

Fintech

I was at Fintech before being assigned to Topads. In here, I played a key role in leading fintech product development, focusing on the inception and development of a p2p lending platform. This involved utilizing React for the frontend, Node.js for frontend support (including server-side rendering and build processes), and Golang for backend operations.

I was also tasked with leading the lender team, overseeing the development of key features such as lender integration and system adjustments for multiple lenders. Simultaneously, I also actively contributed to the borrower team's success by providing valuable technical expertise and actively participating in feature development for the borrower team.

I was reassigned to TopAds after the merger of our business unit with GoToFinancial, where we are tasked with migrating our system and data to GoToFinancial.

GoTo Financial

Finally, during my time at Fintech, I also extended my expertise to GoTo Financial for a brief period, where I took the lead in various projects, utilizing React (JavaScript and TypeScript) for frontend development, and Java/Kotlin for backend tasks.

Responsibilities

Leading Lender Team

- Led the lender team in designing & developing key features such as lender integration and accommodating multiple lenders in the P2P system

- Designed & Developed the system from scratch to allow integration with existing core p2p architecture
- Collaborate with internal and external (lenders, etc) stakeholders to ensure seamless integration of customized lender features

Handling Production Issues

- Demonstrated consistent leadership in addressing a wide range of production issues
- Leveraged team management skills for effective task delegation
- Developed and implemented advanced monitoring and resolution tools, enhancing the team's ability to address issues promptly and effectively

Code Reviews

- Conducted thorough code reviews to ensure compliance with high-quality standards.
- Contributed to the overall reliability and stability of software products.

Led Architectural Design & Strategy

- Actively lead and participated in sessions focused on devising innovative and effective solutions to complex challenges
- Demonstrated strong leadership in driving discussions and decisions to improve application performance
- Played a pivotal role in refining system infrastructure, optimizing resource allocation, and streamlining workflows

Key Achievements

Spearheaded the design & transition to microservice for core features

- Successfully managed the migration of several features from monolithic app with minimal issues despite significant refactoring challenges
- Improved stability, modularity, and speed of our web applications
- Further developed infrastructure to ease the future development of new microservices

Design and implementation of a dynamic preference engine

- Led the design and implementation of a versatile preference engine adaptable to user criteria.
- Developed a flexible system accommodating diverse integration requirements and lending

process flows with minimal changes.

- Delivered an easy-to-use engine with room for continuous improvement.

Led multiple security initiatives to proactively prevent potential breaches

- Led the initiative to *implement authentication in all inter-service APIs*
- Successfully managed to implement authentication despite breaking changes to existing APIs and involvement of multiple microservices.
- Led another security initiative to *encrypt redis data*
- Significantly improved the overall security of the system.

Automated Developmental Workflow

- Took the initiative to implement git hooks to enable standardized coding practices based on agreed-upon rules
- Implement it for both frontend & backend team
- Streamlined the release preparation process by developing automation scripts for the routine tasks necessary before each release
- Ensures adherence to standardized coding style by enforcing agreed-upon rules..

Implemented Logger in Frontend Apps

- Managed to proactively identify and track issues before they result in customer complaints
- Improved issue tracing by allowing engineers to trace the customer's actions, making it easier for us to replicate the issue.

Improving Application Performance

- Found different ways to reduce main bundle size
- Used a customized webpack configuration to maintain main bundle size by optimizing module split
- Managed to reduce bundle size by ~ 50kbs by lazy-loading reducer whilst maintaining SSR feature
- Managed to significantly lower user's bandwidth usage & improve loading times

Automated Data Collection Process

- Led a team initiative to modernize data collection and summarization
- Replaced manual data input on Google Sheets with an automated solution
- Developed an efficient automation approach inspired by web scraping.
- Devised a dynamic system adaptable to diverse data needs

Developed 2 Distinct Redis-Based Search Engine

- Implemented real-time retrieval and search of structured data stored in Redis.
 - Developed a library to promote reusability across various modules
- Implemented keyword-based search for specific districts and related administrative areas
 - Relieved SQL database load with dedicated search functionality
 - Optimized resource-efficient static location data generation.
 - Enabled seamless integration of new keywords

Maintaining an Alert Management System

- Managed alert system to identify issues preemptively
- Developed a streamlined system using Google Sheets to efficiently track and update alerts
- Created batch update functionality for managing numerous alerts
- Enabled users to update multiple alerts simultaneously via sheet input and system activation

PT. Bank Sinarmas, TBK - Front-End Developer

Dec 2018 – Sept 2019

As a Front-End Developer in Bank Sinarmas' Digital Banking Division, I handled tasks involving React Native and Axios for API integration, UI component styling, and proficient use of Redux Form for forms and Redux for local state management. My contributions encompassed robust API integration, refined UI, and optimized form functionality, supporting Bank Sinarmas' digital banking initiatives.

Key Achievements

Implementing Dynamic Forms

- Developed plan to implement adaptive forms that adjust based on configuration
- Incorporated conditional logic to show/hide fields based on user choices
- Enabled prefill of fields with known data for quicker form filling
- Managed to integrate this form into multiple existing products

Addressing AndroidX React Native Compatibility Issue

- Encountered widespread React Native AndroidX issue during development

- Developed custom Gradle script for automatic import replacement with AndroidX versions
- Temporarily resolved AndroidX compatibility concerns, pending React Native dependency fix

Integrating Android APK with React Native

- Developed a React Native library based on a third-party's Native Android API demo
- Seamlessly integrated the React Native Library into the SimobiPlus app
- Created a Proof of Concept (POC) to validate the integration's effectiveness

Additional Projects

NewsFeeds

A personal project aimed at experimenting with various methodologies and technologies. The project encompasses a news aggregation platform that leverages React for the frontend (including Server-Side Rendering) and Node.js for the backend. MongoDB is utilized to store news articles, while Redis serves as a temporary storage solution for trending headlines scraped from the BBC news website. This project is currently discontinued due to significant changes in the structure of the BBC website.

Key Accomplishments

- Created a simple and user-friendly website using React to display news headlines and articles
- Implemented Server-Side Rendering (SSR) to optimize initial page load times and enhance SEO
- Built a backend using Node.js to handle data retrieval and storage for the news content
- Utilized MongoDB to efficiently store and manage the collected news articles
- Implemented Redis caching to optimize the loading speed of frequently accessed headlines
- Employed strategies to minimize the number of scraping attempts to the BBC website, enhancing efficiency
- Gained practical experience with React, Node.js, MongoDB, and Redis technologies

Grab-a-Tab

Created a demo of Grab-a-Tab, a phone tablet-sharing platform designed for Android devices. The demo showcased the user interface and interaction flow for listing available devices,

connecting with others, initiating secure device sharing, and configuring apps for each tablet. Users could find tablets near their location or by tablet type, reserve available tablets, and customize app configurations.

Key Accomplishments

- Designed and developed an interactive Android app prototype for Grab-a-Tab.
- Created a user-friendly frontend interface showcasing the device-sharing process.
- Utilized static mock data to simulate device listings and user interactions.
- Implemented intuitive navigation and user flows within the demo application.
- Produced a video demonstration of the Grab-a-Tab demo, highlighting its functionality and features. The video can be viewed at <https://drive.google.com/open?id=0BxbRMdX6PIKMYklfbW40Nm9hLUE>.
- Gained practical experience in Android app design and development.

Nao Robot Speech Interface

Developed an interface to communicate with a Nao robot using speech commands. Implemented in Java, the project focused on enabling users to interact with the robot using voice commands for various tasks. This project was completed as part of the final year project during university.

Key Accomplishments

- Created a Java-based interface to establish speech communication with a Nao robot.
- Designed and implemented a user-friendly system for users to control the robot using voice commands.
- Gained hands-on experience in Java programming and robotic interaction.
- Successfully showcased the ability to apply theoretical knowledge to practical applications.

IMC - Developing Banking Application

Collaborated in a team of 3 to build comprehensive web and mobile applications for digital banking and corporate banking scenarios. The project included frontend development using React.js for the corporate banking web UI and a React Native mobile app for digital banking. Backend development was done in Java, with Postgresql and MongoDB serving as data storage solutions for different aspects of the project.

Key Accomplishments

- Contributed to a varied project involving web and mobile app development for digital banking and corporate banking scenarios
- Collaborated with team members to design and implement user-friendly interfaces for different banking scenarios.
- Developed the backend infrastructure using Java to support digital and corporate banking functionalities.
- Gained hands-on experience with React.js, React Native, and Java for backend development.
- Utilized different databases, including Postgresql and MongoDB, for efficient data storage.
- Developed skills in teamwork, communication, and project coordination.

Bidi Quiz - Gamified Recruitment Assessments

Developed Bidi Quiz, a project focused on gamifying recruitment tests, including GTI (General Technical Interview) and behavioral assessments. Utilized Unity and C# to create an engaging quiz-style game that assessed candidates' technical and behavioral skills. The project aimed to enhance the recruitment process by making it interactive and enjoyable for candidates, while providing valuable insights for employers.

Key Accomplishments

- Designed and developed a gamified quiz using Unity to transform recruitment assessments.
- Implemented gameplay mechanics to assess both technical and behavioral competencies.
- Collaborated with team members to create a user-friendly and immersive experience.
- Gained proficiency in Unity game development and programming with C#.
- Contributed to innovating the recruitment process through interactive gamification.

SSR using Flask - Monolithic Svelte/React App with Flask

Created a personal project to explore serving Svelte and React applications using Flask. The project aimed to create a monolithic solution for both frontend and backend whilst incorporating Server-Side Rendering (SSR) and lazy loading. The project showcases templates and GitHub repositories for both Svelte and React integration with Flask.

GitHub Repositories:

- Svelte Template: <https://github.com/randy-ang/svelte-flask-template>

- React Template: <https://github.com/randy-ang/react-flask-template>

Key Accomplishments

- Explored the integration of Svelte and React with Flask to achieve a full-stack monolithic architecture.
- Implemented Server-Side Rendering (SSR) and lazy loading for enhanced performance.
- Created templates and repositories to facilitate future Svelte and React projects with Flask.
- Gained insights into building full-stack applications with mixed frontend frameworks.

Educational Background

Feb 2015 – Sept 2018

National Tsing Hua University, Hsinchu, Taiwan
Master Degree, Computer Science Major
Area of research: Storytelling Artificial Intelligence

Nov 2013 – Feb 2015

National Taiwan Normal University, Taipei, Taiwan
Mandarin Training Center

Feb 2012 – April 2014

Monash University Malaysia
Bachelor's Degree, Computer Science Major

Jun 2010 – Feb 2012

Jakarta International College
Diploma of Information Technology

Jul 2006 – Jun 2010

Sekolah Pelangi Kasih
Secondary School & IGCSE (*International General Certificate for Secondary Education*)

Jul 2000 – Jun 2006

Sekolah Pelangi Kasih
Primary School