Dương Bảo Duy

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Summary

Highly accomplished Software Engineer with 9 years of extensive experience in fullstack development, spanning frontend, backend, and mobile applications. Proven expertise in optimizing application performance, designing scalable architectures, and driving innovative solutions across diverse technology stacks. Adept at leveraging modern frameworks, cloud-native technologies (Kubernetes), and AI/ML techniques to deliver robust and user-centric software. Passionate about bridging the gap between technology and human interaction to create simpler, better software.

Work Experience

Freelance Fullstack Developer & AI Researcher | Home | 12/2022 – Present

- Designed and deployed a comprehensive home lab utilizing QEMU, libvirt, and Kubernetes to support fullstack application development and deployment.
- Developed and tested robust APIs and web applications within isolated VMs and containers, integrating IoT components to simulate real-world backend scenarios.
- Gained extensive hands-on experience with DevOps workflows, Linux server environments, and self-hosted developer tools.
- Conducted AI research, including fine-tuning Whisper models with RLHF, porting llama.c to iPhone, and customizing models for specific voice recognition tasks.

Senior Software Engineer | Rever Corp, City, Country | 06/2019 – 12/2022

- Developed and optimized mobile applications using Flutter, integrating with backend services and APIs.
- Enhanced app performance through strategic code refactoring, advanced database query optimization, and effective caching strategies.
- Implemented comprehensive unit tests and automated testing procedures, ensuring high code quality and system reliability.
- Integrated REST APIs for dynamic data retrieval and seamless synchronization between mobile and backend systems.

Senior Software Engineer | VNG Corp, City, Country | 08/2014 – 05/2019

- Developed a mobile video call feature leveraging WebRTC technology, facilitating real-time communication.

- Designed and implemented a sophisticated call quality analysis system for monitoring and   g communication metrics.

- Contributed to both mobile (iOS with C/Objective-C) and backend development, including Python and Java components for data analysis and API services.

Mobile Developer | BraveSoft Corp, City, Country | 05/2013 – 07/2014

- Developed Android and iOS applications, demonstrating versatility across mobile platforms.

- Utilized the Android NDK to implement low-level code for enhancing and modifying FFmpeg's functionality on Android.

- Developed an FFmpeg wrapper for advanced video processing, including cropping, background insertion, and video merging.

Projects

Homelab | Home | 10/2019 – Present

- Designed, built, and hosted a Kubernetes cluster on-premise, serving as a robust platform for fullstack application development and deployment.

GPT Deep dive | Home | 10/2023 – 6/2024

- Developed a nanogpt implementation with specific support for the Vietnamese language, showcasing deep learning and natural language processing skills.

Whisper | Home | 4/2023 – 10/2023

- Built a customized Whisper model with support for the Vietnamese language, demonstrating expertise in speech-to-text technologies.

DocRag | Home | 10/2022 – 4/2023

- Developed an agent/tool within the Langchain framework to efficiently search and retrieve relevant information from the internet, highlighting AI and backend integration skills.

Rever Mobile App | Rever Corp | 06/2019 – 12/2022

- Fullstack mobile application development with Flutter, focusing on performance, API integration, and user experience.

ZaloStats | VNG Corp | 08/2014 – 05/2019

- Designed and implemented a comprehensive analysis system for call quality, involving Python for data processing and C/Java/Objective-C for metric collection.

ZaloCall | VNG Corp | 08/2014 – 05/2019

- Developed a mobile application on iOS using C/Objective-C, enabling robust video call functionality over the internet.

Education

Bachelor in Mathematics & Computer Science | Ho Chi Minh University of Science, City, Country | Sept 2007 – May 2013

- GPA: 7.0/10

Skills

- **Programming Languages**: Python, Javascript/Typescript, Go, Java, C/C++, Dart, Kotlin, Swift

- **Frontend Frameworks**: Next.js, Flutter

- **Backend Frameworks**: Fastapi, Django, Gin, Springboot

- **Databases**: PostgreSQL, Superbase, Baserow

- **DevOps & Platforms**: Kubernetes, Linux, Git, Bash, QEMU, libvirt

- **AI/Machine Learning**: Pandas, Numpy, Matplotlib, Pytorch, MLx, Tinygrad

- **Other Technical Skills**: WebRTC, Android NDK, iOS Development, API Design & Integration

- **Soft Skills**: Critical Thinking, Problem-Solving, Time Management, GTD, Public Speaking, Self-motivation

- **Languages**: English (Working Proficiency), Japanese (Basic)

Awards

- CCNA certified by Trung Tam Tin Hoc DHKHTN