

# Dhafin Fawwaz Ikramullah

## Software Engineer | Game Developer

Software Engineer, Indie Game Developer for fun, a particle vfx/shader enthusiast, and a math enjoyer. Current main specialities are Web, Game, and Backend Development, published a game with **+5000 installs**, wrote a library/tool with **+400 stars** on Github, **1<sup>st</sup> place** Gemastik GameDev XVII, worked inside and led teams on multiple projects.

## Work Experience – Every Paid Work Experiences.

- **Memento** - [2025]  
Freelance Software Engineer for a Photobooth App with Video Editing feature, Payment Gateway, Printer & Camera integration, with Website, Backend Server & Database, and Gmail Notification.
- **Programing Lab Asistant ITB** - [2024]  
Programming laboratorium Asistant for ITB.
- **Rolling Glory Jam** - [2024]  
Internship Software Engineer for kinect (Computer Vision), shader creation, with Unity Engine & PhaserJs.
- **Dewi Sri** - [2024]  
Freelance programmer for a storybook game.
- **Kinnaria** - [2024]  
Freelance programmer for a rythm game.
- **Kirana dan Laplip** - [2023]  
Freelance programmer for a storybook game.
- **Legend of Tampoemas Mountain** - [2022]  
Freelance programmer for a storybook game.
- **Flavy** - [2021]  
Freelance programmer for a visual novel game.

## Skills – Framework/Library/Tools I've used and good at

- **Game Development**  
Unity Engine, C#, HLSL/ShaderLab, PixiJs, PhaserJS.
- **Web Development**  
NextJs, Django, Fiber, SvelteKit, ReactJs, Tailwind, Flask, D3, ExpressJs, Vite, SQLite, MySQL, PostgreSQL, MongoDB, Redis, NodeJs, ThreeJs, Socket.io, k6, PHP, Docker, HonoJs, Storyblok, Vercel, Suabase, OpenAPI/Swagger/Scalar.
- **Mobile Development**  
Flutter, Dart, Firebase, React Native, Unity.
- **Desktop Development**  
Tauri, Rust, .NET, Unity, FFMPEG, Java, Qt, Unity, Python.
- **Operating System Development**  
C, Assembly, Qemu, Linux, Virtual Box.

## Favorite Technical Projects – Some of my Favorite projects. More info at <https://dhafinfawwaz.com/#project>.

- **AnimationUI** - [Unity Engine, C#]  
Easy drag & drop based open source UI animation Tool/Library for Unity Engine, **+400 stars** on Github.
- **Pace Break** - [Unity Engine, C#, HLSL]  
Fast platformer combat, Hollow Knight inspired Game, with observer, state machine, Shader based VFX, etc.
- **Bezier Curve Generator** - [PixiJs, Vercel, Tailwind]  
Interactive Visualized & Animated Bezier Curve Generator Website with DnC & Brute Force Algorithm.
- **Film Store** - [Django, Docker, Tailwind, Playwright, Javascript]  
Ecommerce website about buying film with caching, database, polling, automated End to End testing, etc.

## Contact/More Info

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## Education – The Education I've pursued

- **Bandung Institute of Technology (ITB)**  
Informatics | 6th Semester | Current GPA 3.76/4.00.

## Achievement/Awards – Big Achievement in my Journey

- **1<sup>st</sup> Winner Gemastik XVII** - [2024]  
National level Game Development Competition issued by The Ministry of Education and Technology.
- **Ganesha Award (Ganesha Karya)** - [2024]  
National level Game Development Competition issued by The Ministry of Education and Technology.
- **Finalist IT Fest 2024** - [2024]  
National level Software Development Competition issued by Padjajaran University.
- **Finalist Gemastik XVI** - [2023]  
National level Game Development Competition issued by The Ministry of Education and Technology.
- **2 Category Winner GIM Jam 2023** - [2023]  
National level Game Development Competition by GIM ITB.
- **2<sup>nd</sup> Winner of Game Dev MAGE 7** - [2021]  
National level Game Development Competition issued by Sepuluh Nopember Institute of Technology.
- **Finalist of Kompetisi Sains Nasional** - [2021]  
Top 100 Natianal level Finalist of an official Computer Science Olympiad by The Ministry of Education.

## Organization – Activities throughtout my journey

- **Head of Programming at GIM ITB**  
Lead GIM Website Development, share programming knowlede for an organization about gamedev in ITB.
- **Head of GameDev Committee at Pra-Gemastik ITB**  
Selection of ITB representatif for Gemastik with Himpunan Mahasiswa Teknik Informatika (HMIF).
- **Vice Head of Research & Development at GIM**  
Share research, competition, and manage team project for An organization about game development in ITB.
- **Head of New Member Admission at GIM ITB**  
6 months process of new member selection for An organization about game development in ITB.

- **Memento** - [Tauri, Rust, Next.js, FFMPEG, Supabase, Vercel]  
Photobooth Desktop App with video editing, Payment Gateway, Printer & Camera integration, with Website, Backend Server & Database, and Gmail Notification.
- **SiAbsen** - [Inngest API, NextJs, ExpressJs, Vercel, PostgreSQL]  
Notification bot website for student attendance presence with Scheduler, Cron Job, Authentication.
- **Ocular** - [NextJs, Django, C, SQLite]  
Content-based Image Retrieval with web scrapping.
- **Linkinpurry Social** - [Socket.io, Hono, Vite, React, Swagger]  
Social Media Website with realtime chat, database, k6 load test, OpenAPI docs with Swagger, etc.

## Grouped Technical Projects

### Visualized Solvers with Website/Desktop App

- **Magic Cube Solver** - [ThreeJs, Vite, Tailwind]  
AI Algorithm like Genetic, Simulated Annealing, Stochastic Hill Climbing, etc. with 3D Animated Visualization of Magic Cube Solver.
- **Wikirace Solver** - [PixiJs, Go, Fiber]  
Wikirace solver with nodes visualization with webscrapping & multithreading with Breadth First Search Algorithm and Iterative Deepening Search Algorithm.
- **Breach Protocol Solver** - [C++, Qt]  
Cyberpunk 2077 Breach Protocol solver animated visualization with Brute Force algorithm.
- **Linear Equation System Matrix** - [Java]  
Jawa Swing Desktop App to implement Linear Equation System such as Gauss-Jordan Elimination, Cramer's Rule, Multiple Linear Regression, Polynomial Interpolation, Image Enlargement Interpolatuion.

### Unity Custom Library/Package/Tools

- **VFX Mesh Generator** - [Unity Engine, C#]  
3D Mesh Generator for VFX creation with shader.
- **Reusable FSM with Editor** - [Unity Engine, C#]  
Implementation of Finite State Machine pattern but reusable in Unity including a visual editor.
- **HitBox System with Editor** - [Unity Engine, C#]  
Flexible Hitbox system with visualization and easy edit integrated with the builtin animation system.
- **Very Optimized Coins Shader** - [Unity Engine, HLSL]  
Thousands of coins with variated jump phase, flipbook animation, jump height, etc. rendered in only 1 batch.

### Mobile Development

- **Expiration Reminder** - [Flutter, OpenAI API, MongoDB]  
Reminder Mobile app with QR Code integrated with OpenAI API for auto-generated description.

### Desktop Development

- **Le Mari** - [Python, Flet, SQLite]  
Desktop App to Manage Outfits with tagging system.
- **Farmer Rancher Mayor Simulator** - [C++, Qt]  
Desktop App to simulate farmer, rancer, and mayor.

### Web Development

- **GIM Website** - [NextJs, Storyblok CMS, OpenAPI]  
Lead Software Engineer for an Organization Website, integrated with my Custom Open API Library for NextJs, Storyblok CMS, Database, Prisma ORM, etc.
- **Auth Template** - [NextJs, Django, Express, Go, Fiber, Laravel]  
Auth implementation with various frameworks.
- **Ecommerce Book** - [Django, Javascript, SQLite, Boorstrap]  
Ecommerce website for buying books with SQLite Database, with boothstrap for styling.
- **Linkinpurry Jobs** - [PHP, Javascript, Docker, Apache]  
Linkedin copy Website with file upload, connection request sytem, authentication, etc.
- **RangkiangForm** - [Spreadsheet API, ReactJs, ExpressJs]  
Form with spreadsheet API for Coffee Company.

### OS Development

- **OsLahPokoknya** - [C, Assembly, Qemu]  
Operating System written in C & Assembly with File System, Shell, Multiprocessing, Context switch, etc.
- **TCP Over UDP** - [C++, Linux, Virtual Box]  
TCP implemented over UDP with Sliding Wind, Checksum algorithm, Retries, and Multiplexing.

### Game Development

- **Financial Streams** - [Unity Engine, C#, HLSL]  
Management, Finansial Lieteracy, Streamer Simulation, RPG game winning 1st place in Gemastik XVII 2024.
- **Functional Defense** - [Unity Engine, C#, HLSL, Blender]  
Gamification of Math function/curve. Gemastik XVI Finalist.
- **HexaTap** - [Javascript, PixiJs, Firebase]  
A fun and fast paced tapping web game.
- **Leapy Leapy Fishy** - [Unity Engine, C#]  
3D Game, Won 2nd place in Game Development competition issued by Sepuluh Nopember Institute of Technology.
- **VFX-Shader Collection** - [Unity Engine, C#, HLSL]  
3D Game, Won 2nd place in Game Development competition issued by Sepuluh Nopember Institute of Technology.
- **Project Arthur** - [Unity Engine, C#, HLSL, Blender]  
Hack & slash, Rougelike top down game implementing state machine, observer, object pooling, etc.
- **Grappler Crashers** - [Unity Engine, C#, HLSL]  
Unique hypercasual game with creative mechanic and physics. Implemented pattern like state machine, singleton, etc. It wins 1st place on internal GIM event.
- **Cube Associator** - [Unity Engine, C#, HLSL]  
Chaotic merging game for submission in GMTK Game Jam.
- **Clustered Chaos** - [Unity Engine, C#, HLSL]  
Creative game winning 2 category on GIM Jam 2023.
- **Flavy** - [Unity Engine, C#, HLSL]  
A visual novel game to introduce the campus branch of Bandung Institute of Technology.
- **Legend of Tampoemas Mountain** - [Unity Engine, C#]  
Story book game about the Tampoemas Mountain.
- **Kirana & Laplip** - [Unity Engine, C#]  
Story book game about Kirana & Laplip.
- **Dewi Sri** - [Unity Engine, C#, HLSL]  
Story book game about Dewi Sri.
- **Kinnaria** - [Unity Engine, C#, HLSL]  
Rythm game telling about story of Kinnaria.
- **Snake 4D** - [Unity Engine, C#, HLSL]  
4D Snake game getting **+5000 installs** when i'm a beginner.