

# Ahmad Ghalib Athariq

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## Introduction

Alib is a software engineer with hands-on experience in systems-level development, full-stack web applications, desktop software, and deep learning. He is passionate about applying AI/ML and building robust digital solutions, with burgeoning research skills, end-to-end development experience, and proficiency in C#, C++, and Java.

## Education

**Universitas Sumatera Utara**

*BS in Computer Science (S.Kom.)*

Medan, Indonesia

Sep 2021 – July 2025

- **GPA:** 3.67/4.0
- **Thesis:** End-to-End Multi-Task Deep Learning using SSDLite-MobileViT for Estimating Lettuce (*Lactuca Sativa*) Growth Phenotypes from RGB-D Images
- **Coursework:** Computer Organization & Architecture, Algorithms and Programming, Algorithm Design and Analysis, Data Structures, Database, Computer Vision, Object Oriented Programming, Computer Networks
- **Advisors:** Dr. Pauzi Ibrahim Nainggolan; Seniman S.Kom., M.Kom.

## Work Experience

**PT Xtend Integrasi Indonesia (software house)**

*Backend Developer*

Medan, Indonesia

Nov 2024 – Jan 2025

- Developed secure web APIs for a TNI AD's information system and an in-house ERP product.
- Collaborated closely with the team lead to ensure correct delivery of requested features.

**GeometriSatu Studio (game development team)**

*Game Developer Intern*

Medan, Indonesia

Sep 2024 – Nov 2024

- Developed and designed a reward-based educational mobile game (ScienceOne) in the Unity Game Engine.
- Participated in weekly meetings with the project manager to discuss progress.

**PT Len Industri (Persero) (defense technology company)**

*Desktop Developer Intern (Magang Merdeka)*

Bandung, Indonesia

Feb 2024 – Jun 2024

- Accelerated Link Monitoring & Control (LMC) application development toward operational readiness by successfully integrating it with the company's proprietary Data Link Processor software.
- Developed network socket-level systems designed by the lead software engineer.
- Developed comprehensive unit tests for new and existing modules.
- Enhanced software stability and reliability by meticulously analyzing output logs to identify and resolve critical bugs.

**Revolutionary Games Studio (game development team)**

*Volunteer Programmer*

Online-based (international)

Jan 2020 – 2024

- Spearheaded development of gameplay features, user interface and contributed bug fixes.
- Contributed over 350+ commits and 400k line additions to the codebase – accelerating the development of the game in 3-year span.
- Ensured codebase quality and maintainability by performing rigorous code reviews on pull request submissions to the project's GitHub repository.

## Projects

**Portfolio:** [www.athrqlib.my.id/projects](http://www.athrqlib.my.id/projects) (for additional information and projects)

### Lettuce Plant Growth Estimator


- Engineered an efficient, mobile-first computer vision solution to enable non-destructive estimation of lettuce growth-related phenotypes, potentially supporting low-cost precision agriculture methods.
- Designed a modified lightweight SSDLite-MobileViT (Mehta & Rastegari, 2022) deep learning model with <10 M parameters, utilizing dual-branch architecture.
- Successfully ran model on-device with inference time of <600 ms/frame, qualifying for near real-time application.
- Tools Used: PyTorch, OpenCV, ExecuTorch, Android

### Upahkita.id: Indonesian Salary Data Platform (active 2024 - Jun 2025)

upahkita.id

- Conceptualized and single-handedly engineered a full-stack data platform to provide transparent, geographically-visualized salary data for the Indonesian market. Was deployed to a \$3/mo VPS.
- Developed PostgreSQL change data capture (CDC) middleware to support full-text search microservice using Go.

- Made to prove that building a full-blown end-to-end web app is possible alone and efficiently, by using today's tech stacks.
  - Tools Used: Next.js, TypeScript, Golang, PostgreSQL, Meilisearch
- MixTime: e-Menu Platform (active until Dec 2024)** mixtime.rf.gd
- Developed a web-based soft-drinks menu for a F&B shop with admin (CRUD) functionalities.
  - Utilized third-party image hosting service's (ImgBB) RESTful API to store product images off-site.
  - Tools Used: Laravel, Livewire, PHP, MySQL, TailwindCSS, HTML/CSS, Git

- Space Shooter Game (CMD-based)**  Link
- Developed a Windows-native game, fully running on a command-prompt window.
  - Integrated DirectSound to create a custom audio engine.
  - Tools Used: Windows API (WinAPI), C++, CMake, Visual Studio

**Organization**

- Ikatan Mahasiswa Ilmu Komputer USU**, Communications and Information Staff Sep 2023 – Sep 2024
- Initiated a design overhaul of IMILKOM USU's official website: imilkom.usu.ac.id
  - **Skills**: Trello, Teamwork, Communication, Responsibility, Patience

- Google Developer Students Club (GDSC) USU**, Member 2023 – 2024

**Skills**

- Languages**: Indonesian - Native, English - Bilingual
- Programming Languages**: C#, C++, TypeScript/JavaScript, Python, Java
- Technologies**: PyTorch, ExecuTorch, Go, MySQL, PostgreSQL, Meilisearch, Gradle, .NET
- Developer Tools**: Git, Docker, VSCode, Visual Studio, Linux, CMake
- Other**: Writing, Badminton, Visual Arts