

GAILLE A. AMOLONG

AI Engineer | Lead Full-Stack & DevOps Engineer

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SUMMARY

Results-driven software engineer with 3+ years delivering production-grade web, mobile, and AI solutions. Expert in React/Next.js, React Native, Django/FastAPI, and AWS cloud-native architectures. Passionate about automating delivery, writing clean code, and transforming ideas into scalable products. Recognized as a top-ranked developer on CodersRank and the youngest AI/Software Engineer at BitWork Solutions.

SKILLS & INTEREST

- **Languages:** Python, JavaScript/TypeScript, C/C++, SQL (PostgreSQL, SQLite), NoSQL (MongoDB)
- **Frameworks & Libraries:** React, React Native, Next.js, Django, FastAPI, Flask, Node.js, Express, TensorFlow, PyTorch, OpenCV, Scikit-learn, Pandas, NumPy
- **Cloud & DevOps:** AWS (EC2, ECR, ECS, EKS, S3, SES, Route 53, ALB, Auto Scaling), Docker, GitHub Actions, NGINX, Directus CMS, Stripe, OAuth2/OIDC & Apple SSO, Cypress, Jest, Pytest
- **Tools:** Git, VS Code, Jira, Figma, Postman, Linux, Git Submodules, Railway, Docker Compose

WORK EXPERIENCE

BitWork Solutions — Lead Software Engineer

August 2023 - Present
Melbourne, Florida (Remote), USA

Lead Software Engineer

- Promoted to lead following senior team departures; ensured continuity and took ownership of core architecture, deployment, and technical research.
- Led a lean engineering team across frontend, backend, computer vision, and DevOps, shipping high-impact features in a fast-paced startup environment.
- Delivered end-to-end features in both the customer-facing designer and internal admin dashboard using React/Next.js, TailwindCSS, FastAPI, and PostgreSQL.
- Spearheaded R&D for the Badge Guru rendering pipeline — built OpenCV-based preprocessing for glare removal, affine transformation, and vector cleanup.
- Developed a vector-scaling algorithm using ArUco markers, boosting engraving precision by 25% and throughput by 40%.
- Reworked the session/auth system using NextAuth (OAuth2/OIDC), fixing persistent staging bugs and stabilizing login/logout flows.
- Architected optimized FastAPI endpoints for user-specific logic, improving frontend-backend integration and reducing latency.
- Drove DevOps tasks as needed — managed Docker-based environments, CI/CD via GitHub Actions, and configured AWS EC2 + ALB for blue-green deploys with rollback.
- Mentored junior engineers via pair programming and async code reviews; acted as the bridge between product and engineering to align scope, unblock issues, and drive consistent delivery.
- Rolled out key features like session-based guest workflows, real-time render locking, and lifecycle auditing, while establishing internal conventions for naming, commits, and error handling.

Software Engineer

- Built production-grade full-stack features using React, Next.js (App Router), Django, FastAPI, and Directus CMS, improving performance and scalability across platforms.
- Migrated 4 legacy web portals into a unified Next.js + TypeScript codebase with atomic design components, reducing complexity and boosting maintainability.
- Designed RESTful APIs using FastAPI with PostgreSQL, optimizing DB queries and improving average response times by 28%.
- Implemented secure auth flows with NextAuth, including OAuth2, magic link login, and Stripe billing for subscriptions and seat-based metering.
- Bootstrapped a cross-platform React Native app using an NX monorepo, enabling ~70% code reuse with web.
- Built automated test suites across frontend/backend using Jest and Pytest, achieving 80%+ test coverage.
- Supported infrastructure tasks: authored multi-stage Dockerfiles, maintained GitHub Actions pipelines, and deployed with AWS (EC2, ECS, ALB, S3, DynamoDB).
- Led R&D for the company's CV engine: handled grayscale normalization, inset vectorization, and affine transformations to improve badge guru's image processing.
- Worked cross-functionally with design and product teams to scope features, resolve production issues, and ship consistently in a lean dev cycle.

AI Pilipinas — Lead Software Developer Volunteer

August 2024 - March 2025
Hybrid • Metro Cebu, Philippines

- Orchestrated the launch of the AI Pilipinas portal (staging.aipilipinas.org), supervising a 6-member engineering cohort across front-end, back-end, and DevOps.
- Delivered a modular Next.js/TypeScript UI, FastAPI micro-back-end, and NGINX; non-technical authors can now publish in < 5 min.
- Implemented GitFlow, code-review rubric, and staging previews—doubling PR throughput and cutting prod defects 35 %.

Scriptonomy — AI in Finance Technical Writer

January 2025 - March 2025
Remote

- Authored 10 long-form guides on quantitative investing with Python, TensorFlow, and broker APIs; series amassed 12 k+ reads and a 4.8/5 avg rating.

Head Developer, Minglanilla Science High School

March 2023 - March 2024
Minglanilla, Cebu, Philippines

- Delivered the school's official web app (news portals + custom homepage) using Django + JavaScript, now serving 1.2 k monthly users.
- Added reCAPTCHA, secure authentication, and Docker/Railway CI; 0 downtime reported since launch.
- UX revamp increased average session duration 35 % and earned commendation from the school principal.

Full-Stack Freelance Software Developer, TidalStack

January 2024 - March 2024
Remote

- Built RESTful APIs with Django REST Framework and designed responsive UI components.
- Optimised PostgreSQL queries, reducing average response latency 28 %.

EDUCATION

Cebu Institute of Technology

Bachelor of Science in Computer Science (2024-2028)

Cebu City, Cebu, Philippines

Minglanilla Science High School

High School - STEM Strand

Minglanilla, Cebu, Philippines

High Honors & Excellency in Research and Innovation

- **Project PhEASYCS** - Physics Excogitation Utilizing Artificial Intelligence System (Deep Neural Network) To Yield Comprehension for Students
- **Thesis (Qualitative study)**: The Role of Artificial Intelligence in Organizational Structure and Culture of Employees in the IT company

CERTIFICATIONS

For more information of Gaille's certifications, click this link: <https://gailleamolong.vercel.app/certifications>

Harvard University (2020-2023) - 5 courses

- [CS50P](#) - Introduction to Programming with Python
- [CS50X](#) - CS50's Introduction to Computer Science
- [CS50Web](#) - Web Programming with Python and JavaScript
- [CS50AI](#) - Introduction to Artificial Intelligence with Python
- [CS109x](#) - Data Science with Python

Yale University (2024)

- [Financial Markets Course](#)

Udemy

- [NextJS and React - The Complete Guide](#)

AWS Cloud Solutions Architect Professional Certificate

- [AWS Cloud Solutions Architect Professional Certificate \(Coursera\)](#)

React Native - Mobile Application Development

- [React Native - Mobile Application Development](#)

DeepLearning.AI & Stanford (2023-2024) - 5 courses

- [Neural Networks & Deep Learning](#)
- [Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization](#)
- [Structuring Machine Learning Projects](#)
- [Convolutional Neural Networks](#)
- [Sequence Models](#)

FEATURED PROJECTS

- **The Official MSHS Website** - <https://www.officialmingsci.com/>
- **A.R.T.I.S.T (Artificial Real-Time Image Style Transformer) AI** - <https://github.com/gael55x/ARTIST>
- **MusicAI** - <https://github.com/gael55x/MusicAI>
- **PhEASYCS AI model** - <https://github.com/gael55x/Physics-QandA-AI-System>
- **Car-Detection-AI-Model** - <https://github.com/gael55x/Car-Detection-AI-model->
- **Algo-AI model** - <https://github.com/gael55x/Algo-AI>
- **MessageMe** - <https://github.com/gael55x/MessageMe>
- **Gaille's Blog Post** - <https://gael55x-blog.vercel.app/>
- **Gaille's Portfolio** - <https://gailleamolong.vercel.app/>

AWARDS & HONORS

- Top 1 % Global Developer — [CodersRank profile](#) (2023–present)
- Top 0.7 % Next.js • Top 2 % React, Flask, SQLAlchemy • Top 3 % Django developer worldwide — CodersRank
- Top 5 % Developer in the Philippines across Django, C, NumPy, ReactJS, SQLAlchemy, TensorFlow & Flask — CodersRank analytics
- Youngest Software & AI Engineer at BitWork Solutions — joined full-time at age 17
- Excellence in Research & Innovation Award — Minglanilla Science HS (2024)
- 4th Place, Division Science & Technology Fair — PhEASYCS AI Model (High School)
- Youngest Speaker in AI Conference Cebu - February 16, 2025

SKILLS & INTEREST

Programming Languages: Python, JavaScript/TypeScript, C/C++, SQL (PostgreSQL, SQLite), HTML/CSS, NoSQL (MongoDB)

Frameworks & Libraries: React, React Native, Next.js, Django, FastAPI, Flask, Node.js/Express, TensorFlow, PyTorch, OpenCV, Scikit-learn, Pandas, NumPy

Cloud & DevOps: AWS (EC2, ECR, ECS, EKS, S3, SES, Route 53, ALB, Auto Scaling), Docker, GitHub Actions, Terraform, NGINX, Directus CMS, Stripe

Tools: Git, VS Code, Jira, Figma, Postman, Linux, Railway, Docker Compose

Soft Skills: Problem-solving, clear technical communication, mentoring & team leadership, cross-functional collaboration

Hobbies & Interests: Algorithmic trading, leetcode (solved 540+ problems) physics, open-source, hackathons, travel, teaching budding engineers