Billy Lu

📞 +63 999 366 5493 ✉ a.billy.lu@gmail.com **in** https://www.linkedin.com/in/billy-a-lu
🐙 https://github.com/abillylu 🌐 https://abillylu.github.io/developer-portfolio 📍 Metro Cebu, Philippines

EDUCATION

UNIVERSITY OF SAN CARLOS GRADUATE

BS in Computer Science
August 2019 - May 2023 | Diploma ↗

EXPERIENCE

FREELANCE

Software Developer
June 2023 - Present

SYMPH

Web and Mobile App Developer Intern
March 2023 - May 2023 | Certificate ↗

TECHNOLOGY STACK

PROGRAMMING LANGUAGES
• C • C++ • C# • PHP • Java • JavaScript
• TypeScript • Python • R

WEB TECHNOLOGIES
• HTML • CSS • Bootstrap • Laravel
• Livewire • React • Vue • Flask
• Tailwind CSS • Material UI • Node
• Express • Next • Prisma • Drizzle

DATABASE MANAGEMENT SYSTEMS
• MySQL • PostgreSQL • SQLite
• MongoDB

API TESTING
• Postman • Insomnia

VERSION CONTROL
• Git

MOBILE DEVELOPMENT
• Xamarin.Forms

MACHINE LEARNING
• Pandas • Numpy • FastText
• TensorFlow • Keras • Gensim

PLATFORMS
• GitHub • Figma • Firebase
• ServiceNow • Overleaf (LaTeX) • Notion

TECHNICAL SKILLS

• Problem Solving • Functional and Procedural program design
• Object-Oriented Programming • Agile (Scrum) Software Development • Full Stack Development • Algorithm design
• Algorithm Visualization & Simulation
• Time & Space Complexity Analysis
• Natural Langauge Processing
• Computer Vision • Text & Image Classification • Data Collection & Preprocessing • Data Visualization & Analysis

COURSEWORK

TIMBERTRACK   Inventory Management System
November - December 2020 | May 2021 | November - December 2021 | Technologies: Laravel, Livewire, MySQL | 🐙 GitHub ↗
• Developed *Sales Dashboard*, and *CRUD & Sub-categorization* for products

CHESS APPLICATION   Java Application
May 2021 | Technologies: Java | 🐙 GitHub ↗
• Developed all chess logic

CPU SCHEDULING VISUALIZER   Console Application
January 2022 | Technologies: C | 🐙 GitHub ↗
• Visualizes & simulates CPU scheduling algorithms through a *Gantt chart*

CALCULATOR   Mobile Application
March 2022 | Technologies: Xamarin.Forms | 🐙 GitHub ↗
• Developed simple arithmetic operations

CHAT APP   Mobile Application
April - May 2022 | Technologies: Xamarin.Forms, Firebase | 🐙 GitHub ↗
• Developed *Splash Screen*, *Conversation page*, and *Authentication & User Account Management & Message Storage* through Firebase integration

IMAGE PROCESSING FROM SCRATCH   Java Project Compilation
September 2022 | Technologies: Java | 🐙 GitHub ↗
• Developed *Image Recolor*, *Image Resize*, *Image Rotate*, *Shape Recognition*, and *Letter Classification*

LU FACTORIZATION CALCULATOR   Web Application
May 2023 | Technologies: C, JS, Bootstrap, Vercel | 🌐 Website ↗
• Solves the *L* and *U* Matrices of a given Matrix
• Developed an optimized solution in *C*, then converted to *JS*

PROJECTS

QUICKGRADE   by *Symph*   Web Application
April - May 2023 | Technologies: Python, Amazon Textract, GPT-3.5 Turbo, Flask, FlutterFlow | 🌐 Website ↗
• Web Application Tool designed to help teachers properly check different types of exams with the help of Image Processing (OCR) and AI (LLMs)
• Developed a solution to properly check multiple choice exams

PAMST - PROJECT ACCOUNT MANAGEMENT SIMULATION TOOL   Web Application
October 2023 - June 2024 | Technologies: Laravel, Livewire, Laravel Excel, MySQL, Bootstrap, DigitalOcean | 🌐 Website ↗
• Web Application Tool designed to help Project Managers simulate different decisions during a project, given a project timeline and its resources
• Developed *Document Versioning*, *Task Hierarchy*, *Daily Emails*, *CRUD for Tasks*, *Resources & Financials*, and *Batch Processing*

MTIC-SSA - MEDICAL TECHNOLOGIST INTERNS OF CEBU - SCHEDULE SUMMARY APPLICATION   Single Page Application
October 2024 | Technologies: React, Tailwind CSS, Netlify | 🌐 Website ↗
• Solution designed for medical interns to easily check their shifting schedules
• Provides interns insights, such as: Immediately knowing their shifts, knowing who their shiftmates are, viewing a summary of all shifts, and checking future or previous shift summaries

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INTERESTS

• Full Stack Development • Data Science
• Machine Learning • Artificial Intelligence

REFERENCES

CHRISTIAN MADERAZO, M.ENG.
PROFESSOR ⬈
Department of Computer, Information Sciences, and Mathematics, University of San Carlos
✉ cvmaderazo@usc.edu.ph
📞 (+63) 995 462 2493

CHRISTINE PEÑA, MMATH
PROFESSOR ⬈
Department of Computer, Information Sciences, and Mathematics, University of San Carlos
✉ cfpena@usc.edu.ph

TEDDY DULLANO, MSIT
PROJECT MANAGER
Indra
✉ teodoro0320@yahoo.com
📞 (+63) 919 992 3261

JOSHUA GARCIA
SOFTWARE DEVELOPER
Symph
✉ joshua@symph.co
📞 (+63) 906 538 1101

JOHN DAVES BAGUIO
IT OPERATIONS SPECIALIST
GoodApps Inc.
✉ jdavesbaguio@gmail.com
📞 (+63) 977 344 0268

PROJECTS

THOR CUSTOMS BROKERAGE - DMS FULL STACK APPLICATION (DESKTOP)
January - May 2025 | Technologies: Python, TypeScript, Electron, React, Material UI, Express, PostgreSQL, Prisma, Supabase, Vercel | ⌨ GitHub ⬈
- Document Management System that helped the business instantly organize and create statement of accounts and billing statements
- Processed the company's document backlogs and organized these documents into one folder structure
- Includes features such as user authentication and authorization, document pdf generation, affixing e-signatures, CRUD for storing container van numbers, customers, statement of accounts, billing statements

AGRESOURCE INC. - IMS FULL STACK APPLICATION
June 2025 - Present | Technologies: Next, React, TypeScript, Tailwind CSS, Better Auth, PostgreSQL, Drizzle
- Digital Transformation Solution for local probions company Agresource Inc.
- Currently a work in progress

PUBLICATIONS

TEXT CLASSIFICATION OF CLIMATE CHANGE TWEETS USING ARITIFICIAL NEURAL NETWORKS, FASTTEXT WORD EMBEDDINGS, AND LATENT DIRICHLET ALLOCATION
COMPUTER SCIENCE THESIS MANUSCRIPT | ◈ IEEE XPLORE
Technologies: Python, Pandas, Numpy, FastText, TensorFlow, Keras, Gensim
- Presented: June 9, 2023 at Advances in Power, Signal, and Information Technology (APSIT 2023) | Certificate
- Published: August 9, 2023 on IEEE Xplore