

# Johnfil Initan

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🔗 Personal Website    in LinkedIn    🐙 GitHub

I am a computer engineering student dedicated to making impactful hardware and software solutions. I enjoy making all sorts of computer applications, and I aspire to become a digital nomad.

## EDUCATION

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**Bachelor of Science, Major in Computer Engineering,**  
*University of San Carlos*

Expected June 2024  
Cebu, Philippines

## SKILLS

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### Programming Languages

C, Java, Python, Swift, PHP, HTML, CSS, JavaScript, TypeScript, x86

### Web Development

React, Next.js, Tailwind CSS, PostgreSQL, Node.js, Django, Postman

### Data Science

TensorFlow, Keras, pandas, NumPy, scikit-learn, MATLAB, OpenCV, Matplotlib

### Hardware & Electronics

Arduino, Intel 8086, PIC16, Verilog, Proteus, MPLAB

### Design

Figma, SketchUp, EAGLE, AutoCAD

### Other

Git, Bash, Firebase, MS Office Suite, LaTeX

## PROJECTS

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### Virgorus Travel Services, web application [🔗](#)

- uses Axios library for API fetches that retrieves data and dynamically displays information based on the required data field.
- route protection and admin authentication is implemented via NextAuth.

### EZ-Forms, web application [🔗](#)

- uses Next.js and the ShadCN UI library for rapid development of a dynamic user interface.
- employs the OpenAI API to create a GPT3.5-powered tool which auto-generates suggestions for fields such as descriptions, objectives, agenda, and program flows

### DProSA, machine learning [🔗](#)

- built desktop application for experimentation using Python and the Tkinter GUI library.
- leverages the NumPy, Pandas, and SciKit-Learn libraries to formulate a dynamic sorting algorithm.
- visualizes algorithmic performance data with Matplotlib to the Python-based desktop application.

### E-Plote, software development

- developed a Django-based API responsible for managing RESTful operations on a PostgreSQL database which is hosted on a server configured to serve specific IPs within the local network.
- built a Python application that locally stores transaction data from an externally interfaced RFID-scanning device and syncs the local data to the database once it receives network connection.

### Soil Moisture Detector, hardware development

- designed and virtually-simulated the electronic circuit via Proteus.
- programmed the main program logic of the PIC16F877A microcontroller in MBLAB IDE.
- interfaced a soil moisture sensor to read data via an interrupt service routine and displays it to a 4x20 LCD.