

# MARC JAMES BELTRAN

## ELECTRONICS ENGINEER

+639926284153 | beltranmarcjames@gmail.com | <https://github.com/MJBeltran13>

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### SUMMARY

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An Electronics Engineer specializing in embedded systems and IoT solutions, with hands-on experience in microcontroller programming, hardware and software design, AI model development, and cloud-integrated applications. I have worked in research and development projects, where I optimize workflows, develop prototypes, and deliver scalable solutions aligned with organizational objectives.

### WORK EXPERIENCE

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**Batangas State University- The National Engineering University** **Aug 2023 - Dec 2024**

PROJECT TITLE: Commercialization of BatstateU Customizable and Open platform for IOT

ROLE: Project Staff

- Planned and carried out tasks aligned with company goals
- Led and supervised interns
- Developed libraries, designed PCBs and enclosures, and generated Gerber files using SolidWorks and KiCad; performed simulations in Ansys
- Assembled, soldered, and reworked electronic boards and components
- Used basic web technologies (HTML, JavaScript, CSS) and deployed a website

**Batangas State University- The National Engineering University**

**Nov 2024 - Sept 2025**

PROJECT TITLE: TRIOE (Tinkering Resources for Internet Of Everything)

ROLE: Hardware Integration Engineer

- Designed and integrated custom hardware, including PCB layouts, enclosures, and Gerber files using KiCad and SolidWorks
- Hands-on experience in prototyping, soldering, reworking, and full system assembly
- Developed and deployed full-stack solutions using HTML, CSS, JavaScript, and backend technologies
- Integrated hardware and software for IoT, embedded, and automation projects
- Regularly facilitated workshops and shared knowledge on electronics, embedded systems, and rapid prototyping
- Took on cross-functional tasks, contributing to both technical work and planning

**Freelance Software and Hardware Developer**

**Nov 2024 - Present**

- Developed embedded systems using microcontrollers and microprocessors (ESP32, Arduino, STM32, Raspberry Pi).
- Programmed firmware and applications using C/C++, Python, and JavaScript.
- Designed and prototyped custom PCBs, including schematic, layout, and hardware debugging.
- Built full-stack and IoT solutions integrating devices with servers and cloud services.
- Modernized business processes by migrating systems to web-based and cloud-enabled platforms.
- Deployed and maintained servers, APIs, and databases for real-time monitoring and automation.

### TECHNICAL SKILLS

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- NodeJS
  - Web Development
- Python
  - Artificial Intelligence Model
  - Dashboard Development
- C++
  - Microcontroller
  - Microprocessor
- SolidWorks
  - 3D models and electronic enclosures
- AutoCAD
  - 2D technical drawings
- KiCad
  - PCB schematics and layouts
  - Gerber and BOM files
- ANSYS
  - Structural and thermal simulations
- NI Multisim
  - Circuit simulations

## PERSONAL INFORMATION

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NAME: Marc James M. Beltran  
BIRTHDATE: December 13, 2000  
AGE: 25  
ADDRESS: San Pedro, Bauan, Batangas  
SEX: MALE  
CIVIL STATUS: SINGLE  
RELIGION: Roman Catholic

**Batangas State University Main  
Campus II**  
Bachelor of Science in Electronics  
Engineering | Major in  
Microelectronics  
Alangilan, Batangas City 2019-2023

## CERTIFICATES AND AWARDS

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### **Engineering Innovation Challenge Champion 2022 - Singapore**

Senate Resolution No. 57: RESOLUTION CONGRATULATING AND COMMENDING BATANGAS STATE UNIVERSITY FOR THEIR EXEMPLARY PERFORMANCE AND FOR WINNING THE CHAMPIONSHIP IN THE UNIVERSITY CATEGORY IN THE ENGINEERING INNOVATION CHALLENGE (EIC) 2022

Link: <https://newsinfo.inquirer.net/1699507/batangas-students-bag-top-award-in-singapore-engineering-contest>

Link: [https://legacy.senate.gov.ph/press\\_release/2023/0322\\_prib1.asp](https://legacy.senate.gov.ph/press_release/2023/0322_prib1.asp)

### **Sangguniang Panglungsod: Certificate of Commendation Award given at 17th day of January 2023**

Certificate of Recognition given at 2nd Day of December 2022

### **Collins Aerospace Innovation Hackathon 2022**

Certificate for Collins Aerospace & Batangas State University "Innovation Hackaton 2022" held on 6-7th day of December 2022

### **Smart PLDT Innovation Generation Season 3 2023**

KILO 100 Finalist (April 2023)

MEGA 50 Finalist (April 2023)

GIGA25 Finalist (May 2023)

  
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