

# Tolentino Abner Jr Morales

Software Engineer · Computer Engineer · Artist

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## Experience

### Hewlett Packard Enterprise

Jan 2022 - Jun 2022

Software Firmware Engineer Intern

- Developed regression test frameworks for Network Switches using Pytest, Ceedling, Unity and CMock

### Microtube Technologies

Oct 2021 - Nov 2021

Software Engineer Intern

- Led an initiative to create a data visualizer for Bluetooth sensors using UWP and Unity. Designed the UI/UX and completed the software implementation in time for their sensor kit launch

### National University of Singapore

May 2021 - Aug 2021

Technical Project Manager

- Mentored 5 teams on software engineering best practices and the fundamentals of app development

## Projects

### Dance Move Detector

Aug 2021 - Nov 2021

Python/C++ Developer

- Developed a wearable dance move detector that uses neural networks
- Designed and implemented the Bluetooth protocol between IoT devices with Python on Ubuntu
- Implemented the reading and processing of IMU and EMG data on Arduinos in C/C++

### RPG Adventure Game

May 2020 - Aug 2020

Game Developer

- Developed a pixel platformer adventure game inspired by MapleStory
- Designed and implemented gameplay, physics, and software architecture on Godot in GdScript
- Clinched Top 6 of 383 projects in NUS SoC's Orbital 2020 for good software engineering

### Smart Walking Stick

Aug 2022 - Nov 2022

ML Engineer

- Developed algorithms for fall detection using ML models in Python using TensorFlow and sklearn
- Researched and implemented optimizations to run directly on a ESP8266 microcontroller at 99.0% accuracy

## Skills

**Languages** C/C++ · Python · C# · Java · HTML/CSS/JS · Verilog · SQL

**Technologies** Unity · Godot · UWP · Arduino · Git · Unix · Docker · Vivado

**Tools** Vim · Figma · Photoshop

## Education

### National University of Singapore

Aug 2019 - Expected July 2023

B.E Computer Engineering

- CAP:** 4.78/5.00 · Dean's List
- Modules:** SE & OOP · DSA · OS · Networks · AI · Game Dev · Graphics · Image Processing · Computer architecture · Databases
- Others:** Carnival Jam 2021 · Execute Hackathon 2020 · NUS Comics and Animation Society