

# Kennett Adrian Puerto Diaz

## Tegucigalpa, Francisco Morazan, Honduras

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## Experience

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**University of Kentucky** [[Cpp, Typescript, Javascript, Go, Lua, smt]]  
*Graduate Research Assistant*

May 2025 - Ongoing  
Lexington, KY, U.S.A

- Developed Mock Master, a SMT value extractor and mock generation pipeline for the Bosque Programming Language, which allows us to get runtime errors at compile time.

**Kentucky State University** [[Python, SQL, AWS, C/C++, IoT]]  
*Undergraduate Research Assistant*

August 2023 - August 2024  
Frankfort, KY, U.S.A

- Led a 3-person team on the development of Beesual. An anomaly analyzer for beehives. Beesual alerts and predicts the temperature of a beehive before it reaches dangerous levels and alerts bee farmers before anything bad happens via Python.
- Developed the temperature monitoring system using embedded systems such as Arduino, 3D Modeling and C++.
- The analyzer renders a 3D view of inside of the beehive for farmers to easily detect any issues such as it being about bee illnesses or structural leaks which reducing hive losses.

## Projects

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**Daedalus: Game Engine** [[C]] June 2025 - Ongoing

- Portable 2D game engine written in C99. In which everything is done from scratch. Window creation, player input, audio, hot-reloading code, custom UI framework, collision-checking algorithms and SIMD operations.
- Creating custom shader pipeline API for OpenGL. To render textures and 2D lighting systems and particle effects.

**Yum-Yum-Reader : Document Viewer** [[Odin, Raylib]] October 2025 - Ongoing

- Yum-Yum-Reader is a file reader that supports the following formats at the moment. PDF, Epub, and MOBI.
- Custom UI system that can be customized by the end user without any need of programming.

**Parser: Syntax Highlighter** [[Javascript]] June 2025 - August 2025

- Syntax highlighter parser for the Bosque Programming Language.
- Using the tree sitter library the parser is available to any text editor that has an implementation of it.
- Supported editor are Neovim, Emacs, Helix, Sublime Text, Visual Studio Code, Zed, Lapce, Lite XL, Atom, GNOME Builder, Kakoune, Micro, etc.

## Education

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**Kentucky State University** GPA: 3.8 August 2020- May 2024  
*Bachelors in Computer Science* Frankfort, KY, USA

**University of Kentucky** GPA: 3.5 August 2024 - On Hold  
*Master's in Computer Engineering* Lexington, KY, USA

## Awards

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**Lyman T. Johnson Scholarship** [[University of Kentucky]] February 2024

- Awarded for students that follow in the footsteps of Lyman T. Johnson for their pursuit in education.

**KAS Thoroughbred Award** [[Kentucky Academy of Science]] February 2023

- Highest Score of Thoroughbred in the Kentucky Academy of Science poster presentation.

## Skills

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**Programming Languages:** C, C++, Typescript, Javascript, Zig, Odin, Lua, Go, Java, Bosque, Bash

**Tools:** Linux, .NET, SQL, OpenGL, Azure, React, NextJS, Svelte, Boost, SQL, Kubernetes, NixOS, Django