

# Abiud Cantu

I'm passionate about Computer Science, Data Science and App Development.

## EXPERIENCE

### Children's Hospital of Philadelphia, Research Technician

Oct 2021 - PRESENT

As a Research Technician at the Lingappan Laboratory, I have gained valuable skills in multiomics data analysis. I work with various types of data, such as RNA-seq, single cell RNA-sequencing, and spatial transcriptomics, and use R and Python to perform statistical tests and generate visualizations. I ensure the reproducibility of my analysis pipelines by using Docker and Quarto. Furthermore, I create interactive web apps with the Shiny R framework to communicate my findings effectively. I also contribute to the development and maintenance of our filemaker databases by writing filemaker scripts and designing new ui/ux features according to the team's requirements.

### Plant it Forward, Volunteer software developer

Mar 2021 - Oct 2021

Led the development efforts for an in-house, cross-platform application utilizing Flutter and Firebase. The application aimed to facilitate communication among team members and maintain records of weekly available produce for distribution. Successfully integrated authentication and role-based access. Orchestrated the design of both user interface and user experience.

### Baylor College of Medicine, Software Engineer/Data Analyst.

Developed a relational SQL model for FishNET's database using FileMaker, creating a user-friendly UI with over a hundred custom scripts. Collaborated on lab member-driven UI/UX enhancements and integrated APIs like Google Charts for dynamic reports. Introduced streamlined record-keeping standards at BCM labs. Streamlined Next Generation Sequencing (NGS) analysis by automating tasks with Bash scripts, fostering efficient data organization. Generated cost and time savings for BCM labs through a shared NGS-ready Unix environment.

## PROJECTS

### UTRGV Assistant — Senior Project

Developed a dynamic Facebook Messenger chatbot designed to assist students with inquiries regarding UTRGV's classes and professors. Utilized Wit.ai for natural language processing, while employing Express and MongoDB on the backend to handle data processing and storage. Crafted an engaging user interface through HTML, CSS, and JavaScript on the frontend to ensure a seamless user experience.

### Lingappan Lab website — <https://www.lingappanlab.com/>

Revamped the Lingappan Laboratory's online presence by designing and launching a new website using NextJs. Spearheaded the creation of a distinctive laboratory logo and aesthetic theme. Notably, the website showcases various sections, encompassing team member profiles and dynamic presentations of ongoing projects, enhanced by engaging R shiny apps.

### TravelCost Scout — Hackathon project

Created a web app using HTML, CSS, and JavaScript. It locates the most affordable airfare for travel between two points, showcasing results on an animated map. For optimal savings, the app suggests multi-flight options.

## EDUCATION

### Masters of Science (M.S) - Computer Science, GPA 3.83

Jan 2019 - Dec 2020 / University of Texas Rio Grande Valley

Philadelphia, PA.

[abiudcantu@gmail.com](mailto:abiudcantu@gmail.com)

[abiudcantu.com](https://abiudcantu.com)

[github.com/Abiud](https://github.com/Abiud)

## Personal Projects

Currently learning game development using Godot.

## Skills

Advanced skills in R, C++, javascript, python.

Intermediated skills in bash, PHP, C#, SQL.

Beginner skills in pearl, Dart.

## Achievements

Published 7 peer-reviewed research papers, serving as the first author for 4 and contributing as a co-author for 3.

MLH algolia challenge winner for best implementation of algolia.

## LANGUAGES

English, Spanish

