Diego A. Coronado

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Education

University of Houston, *GPA: 3.8* Houston, TX
B.S. Computer Science, Focus: Data Science *2023 - 2026*
B.S. Mathematics, Focus: Data Science *2024 - 2026*

Experience

Tutor Fellowship Jan 2025 – Dec 2025
Ignite Teach For America *Remote*

- Provided virtual one-on-one tutoring to underserved students, helping accelerate their academic progress and foster educational equity
- Participated in comprehensive professional development sessions to enhance tutoring effectiveness and student engagement strategies
- Collaborated with Ignite Site Leaders and fellow tutors to implement personalized learning approaches and track student progress
- Engaged in regular feedback sessions and development activities to continuously improve tutoring effectiveness

Computational Physics Undergraduate Research May 2024 – Aug 2024
CTBP Rice University *Houston, TX*

- Conducted research on cell differentiation of chromosome ensembles using minimal models
- Utilized Minimal Polymer Models to simulate and analyze Hi-C maps for multiple human cell lines
- Performed simulations of Chromosome 10 across various cell lines
- Developed pipelines for ensemble analysis using techniques such as PCA, t-SNE, and UMAP
- Collaborated with team members and presented findings in weekly meetings

Projects

UH Approval System | Django, PostgreSQL, React, Vite

- Developed a web-based academic form submission and approval system using Django backend and React frontend
- Implemented Office365 authentication for secure user login and role-based access control
- Designed and built a hierarchical approval workflow system allowing for complex multi-step processes
- Created electronic signature functionality for PDF document generation and validation
- Built administrative interfaces for managing users, organizational units, and approval delegation
- Integrated with another team's system to expand service coverage across multiple organizational units

Medical Clinic Management System | MySQL, Node.js, Express, Sequelize, React

- Designed and implemented a detailed database schema for efficient management of medical clinic operations
- Developed a backend API using Node.js, Express, and Sequelize ORM, establishing complex relationships between entities
- Implemented user authentication and role-based access control for secure data management across different user roles
- Created API endpoints for core functionalities including user registration, appointment scheduling, and medical record management

Skills

Programming: Python, SQL, C/C++
Data Engineering: Snowflake, PostgreSQL, MySQL, ETL Pipelines, Data Modeling
Data Analysis & ML: Pandas, NumPy, Scikit-Learn, Jupyter, Matplotlib
Tools: Git, Linux, Shell

Relevant Course Work

Computer Science: Algorithms & Data Structures, Operating Systems, Database Systems, Software Engineering, Software Design, Data Science
Mathematics: Linear Algebra, Probability, Statistics, Calculus I-III, Discrete Mathematics, Data Science