PAUL RODRIGUEZ

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EDUCATION

Master of Science in Computer Science — June 2019
University of California, Riverside

Bachelor of Science in Computer Science — June 2018
University of California, Riverside

PROJECTS

Feature Selection — March 2019
- Developed a program in Java that selects features from a data set that could be used to create a predictive model
- Used nearest neighbor algorithm and a "wrapper" function to remove irrelevant features from being considered
- Implemented forward and backward selection algorithms to determine relevant features from the data set
- Efficiently modified the forward selection algorithm to reduce the computational time by more than 50%

Placement and Routing System — November - December 2018
- Designed and built an ILP-based placement and routing system in Python for continuous flow microfluidics
- Implemented the "Columba-S" routing model using the Gurobi ILP solver to meet a specified objective function
- Translated the constraints from Columba-S implementation to obtain the ILP formulation needed for the solver
- Successfully modeled the placement of microfluidic modules onto a chip of set dimensions.

Airline Database — November - December 2017
- Modeled and programmed an internet booking system for airlines in Java
- Used an ER-diagram to build the relational schema in SQL used for retrieving the contents from the database
- Allowed user to add passengers, book flights, take customer reviews, list flights between origin and destination, list popular destinations, list highest rated routes, list flight duration and list available seats for a specific flight
- Retrieved information 25% faster when indexing and clustering were used in the database

SKILLS

- **Programming:** C++, C, Bash, Python, Java
- **Software:** Atmel$^®$ Studio 7, Xilinx
- **Operating Systems:** macOS, Windows, Linux
- **Languages:** English (advanced), Spanish (advanced)
- Understanding of network infrastructure with an emphasis on Cisco hardware

JOB HISTORY

Teaching Assistant | University of California, Riverside — September 2018 — Present
- Instructed lab section of 25 students in Intermediate Embedded & Real-Time Systems
- Presented students with lab assignments and verified correctness of assignments at the end of lab
- Assisted students in resolving issues and challenged them to provide efficient solutions
- Supervised student examination sessions and submitted student records to professor

AWARDS

Recipient of UC Riverside Chancellor's Scholarship — September 2014 - June 2018
Dean's Honor List — Spring 2015, Winter 2016, Spring 2017, Fall 2017