

## Jesus Molina

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### Education

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#### **Master's in Software Engineer at University of Texas at El Paso**

Awarded: December 2017

GPA: 3.80/4.0

Research Assistant

##### **Relevant courses:**

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|-------------------------------------|------------------|---|
| • Software Project Management       | • Formal Methods | • Software Integration and V&V                                  |
| • Software Requirements Engineering | • Data Mining    | • Design and specification of Real-Time Systems (Using VxWorks) |
| • Software Architecture and Design  |                  |   |

#### **Bachelor of science in Computer Science at the University of Texas at El Paso With a Minor of Math**

Awarded: May 2016

Cum Laude

Major GPA: 3.80/4.0

Research Assistant

##### **Relevant courses:**

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|---------------------------|--|--------------------------------|
| • Artificial Intelligence | • Computer Decision Making and Risk Analysis | • Software Reverse Engineering |
| • Mobile App Development  |  |                                |

### Experience

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#### **Teaching Assistant, CS 3331 (Advanced Object-Oriented Programming), UTEP, (August 2016 – Present)**

Assist students in acquiring knowledge and skills necessary to develop reusable, maintainable, and quality software by, as well as:

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|---|--|
| • Helping students with homework assignments (mostly programming exercises) | • Lecturing  |
| • Grading and creating exams, homework, and quizzes                         | • Providing office hours for students' assistance                          |
|   | • Participating in Continuous Quality Improvement activities of the course |

#### **Teaching Assistant, CS 2401 (Elementary Data Structures), UTEP (January 2016 – May 2016)**

Assist students in acquiring knowledge and skills necessary to understand fundamental computing algorithms, including searching and sorting; recursion; and simple data structures. Duties also included:

- Participating in course lectures and answering questions and clarifying topics
- Identifying, reporting, and working with struggling students
- Providing office hours for students' assistance

#### **Research Assistant (Volunteer), Intelligent Agents and Strategic Reasoning Research Group (June 2015 – August 2015)**

Participated in research activities within the Intelligent Agents and Strategic Reasoning Laboratory lead by Dr. Christopher Kiekintveld. My work focused on refactoring of a heavily decayed simulation software system called GameSimulator.

- Followed a Waterfall process of eliciting requirements, developing design solutions, coding, and testing
- Developed in Java
- The resulting software had an improvement of over 200% performance, and followed strict engineering practices of modularization, and coupling.

### Projects

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- **Qar:** Car which learned to drive using Q-Learning algorithm developed in Java.
  - **Sentiment Analysis for the Yelp Dataset Challenge:** Written in Python using Naïve Bayes and multiple resources such as pandas and nltk
  - **Motion detection security camera with Raspberry Pi:** Written in Python for the Raspberry Pi using a PiCamera and computer vision technologies such as OpenCV
  - **Google Maps Proximity Reminder:** Written in Java for the Android Operating System, used Google Maps Api, and the Model View Controller Pattern.
  - **Racing Car Game:** Developed in C for the MSP430 microprocessor.

### Skills

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**Programming Languages:** Proficiency in Java, Python, C, Ruby, Haskell, PHP, Prolog, C++, SQL.

##### **Software Engineering Methodologies:**

- Development process models: Waterfall, Phased Development, and Agile Methods (Crystal)
- Software Testing: Unit, Integration, System, Automated Testing, DB Testing, Performance Testing
- Software Architecture and Design: Module, Component and Connector, Deployment Views of software architecture.

**Mobile Application Development:** Android Framework, Activities, Fragments, Intents, Google Maps API, Manifests, UI Development.

**Artificial Intelligence:** Searching, Decision Theory, Game Theory, Clustering, Classification, Link Analysis, Sentiment Analysis, Anomaly Detection, Optimization, Association Rules.