Roman Tejada

• 2501 Pamela Way apt 303, Blacksburg, VA 24060 • romant@vt.edu • (571) 340 0245
• github.com/tejadaR • linkedin.com/in/roman-tejada

Work Experience

Energy-Smart Manufacturing Research Assistant - Virginia Tech, Blacksburg, VA
09/2016 -present

- Developed a Spring-based RESTful application in Java, with an embedded Tomcat server.
- Created a mobile application in C# for a handheld RFID scanner, able to process the scanner's input, and communicate with the server side by sending HTTP requests.
- Created a database using MySQL to store scanned RFID data regarding orders, customers, materials and design.
- Integrated these tools with the goal of minimizing energy consumption and improving real-time flexibility of a large additive manufacturing network, while still meeting quality, productivity and reliability requirements.

Projects

Northrop Grumman: Airport Analysis using Machine Learning - *github.com/tejadaR/AREA*
09/2016 -present

- Developed a supervised learning-based prediction tool using Apache Spark's Scala API, able to predict the runway exit that an arriving aircraft will take, trained and tested on thousands of flight records.
- Performed pre-processing, feature engineering, hyper-parameter tuning and trained a random forest classification model.
- Developed a GUI using ScalaFX to view analysis results for different airports.

2016 SIMIO International Simulation Competition: 1st Place (250 teams, 14 countries)
09/2016 – 12/2016

- Developed a simulation model for a warehouse distribution problem using SIMIO, an object-oriented modeling framework.
- Implemented verification and validation techniques, including tracking and testing independent modules.
- Optimized parameters and analyzed the resulting data, achieving an impact of $38 million in potential savings compared to using the economic order quantity formula.

Contest Overview: simio.com/academics/StudentCompetition/December2016/contest-overview.php

Inventory Policy Solver

- Developed a tool that calculates the optimal re-order policy, based on a Probabilistic Operations Research project
- Modeled the demand probabilities using a discrete-time Markov Chain, written in Java.
- Added parameter flexibility through a JSON file to test different scenarios by adjusting costs, revenue and capacities.

Technical Skills

Software Development Proficiency
Clean and well documented APIs using object oriented, aspect oriented, and functional programming, MVC, RESTful web services, version control (Git), Scrum, build tools & dependency management (CMake, sbt, Gradle, Maven), unit testing (CUnit, JUnit, ScalaTest).
Languages and Frameworks/Engines
Scala, Java, Python, C#, C++, SQL, Javascript
Apache Spark, ScalaFX, Spring, Pandas
Applications
Eclipse, Unix shells, Vim, Minitab, SIMIO, LabVIEW, Android Studio, Microsoft Visual Studio, Pycharm, Putty, Adobe Suite.
Relevant Expertise
Machine Learning, Operations Research, Discrete-Event Simulation, Statistical Process Control (SPC), Production Planning and Inventory Control, Data Management, Manufacturing Processes, Facilities and Logistics, UI/UX, Lean.

Education

Virginia Polytechnic Institute and State University (Virginia Tech) — Blacksburg, VA
B.S. Industrial & Systems Engineering — expected 5/2017