Angelo Cruz

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EDUCATION

The Johns Hopkins University, Whiting School of Engineering — Baltimore, MD
B.S. in Biomedical Engineering (Computational Biology Focus), Minor in Computer Science — May 2015

PROFESSIONAL EXPERIENCE

Deloitte Consulting, LLP — Washington, D.C.
Technology Consultant, Software Developer — Aug. 2016—Present

Semantic Open Source Software (SEMOSS) Platform

- SEMOSS (semoss.org) is an open-source, web-based, end-to-end data analytics and visualization tool developed in-house at Deloitte and deployed at 14 federal and commercial healthcare organizations
- Managed two contracts totaling $1M in cost by leading a team of 3 junior practitioners to deliver custom data analytics solutions to a health insurance client and a large federal agency, each project involved tens of thousands of data points
- Led journey mapping sessions with end users to identify pain-points and features critical to the application's success; converted these into technical requirements and gauged their complexity and priority for our development team
- Designed, implemented, and tested over 50 new features and 5 visualizations as part of a small development team (10 persons) that were pushed to the production builds of the SEMOSS tool and its user base (over 150 daily)
- Facilitated the institution of multiple DevOps best practices into the team's development, build, and deployment processes that cut time to production by 50% and streamlined our team's testing process by developing Unit Tests for core services

Firm Contributions

- Co-authored multiple proposals that resulted in Deloitte gaining 4 new clients in the federal and non-profit healthcare space with contracts totaling over $1M in cost as part of a small business development team that focuses on capturing work related to translational medicine, medical devices, public-private partnerships, and overall healthcare strategy
- Co-lead a team of 5 junior practitioners in a technology strategy assessment project for a social enterprise in India; our team worked with the organization's CEO and CTO to fully address the organization's technology integration plans resulting in reducing the spend on unnecessary technology by 50% while adding 2 new sources of consumer data
- Led a team of 2 junior practitioners to assess and improve the business model for a predictive machine learning startup by providing customer segmentation analysis, competitor analysis, and financial modeling adjustments; this company now uses all of the documentation we provided in their business plan and pitches

Booz Allen Hamilton — Washington, D.C.
Technology Consulting Analyst — Jul. 2015—Aug. 2016

Improper Payments Estimation for a Federal Healthcare Agency

- Served as a System Architect, Developer, and DBA for an effort which estimates improper prescription drug payments by auditing a sample of prescription claims in the form of 9,000+ HIPAA protected documents
- Improved the internal web-tool which the team uses to interface with the claims data by leveraging JavaScript, HTML, CSS, and MS SQL Server while also maintaining the integrity and security of the system
- Converted business requirements for the web-tool to technical specifications and timelines within the project workflow

Strategic Investment for a Private Hospital Client

- Served as a Data Scientist in a team setting to develop a predictive analytics tool for a private hospital client
- Extracted EMR data and designed ML algorithms (random forests, SVMs) in Python that leveraged various patient risk factors in order to calculate the probability of a patient being readmitted within 30 days of discharge
- Achieved a 70% success rate in retrospective studies where the tool would predict readmission rates

The Johns Hopkins University Center for Bioengineering Innovation & Design (CBID) — Baltimore, MD
Design Team Member — Jun. 2013—May 2015

SprioSense, a Novel Spirometry System

- Part of a 5-person undergraduate team that created a novel diagnostic spirometer prototype that met clinical spirometer guidelines (2.84% error rate in measurements) and could be produced for less than $25 USD.
- Conducted preliminary stakeholder interviews with medical professionals and patients with chronic lung disease in order to narrow down pain points and prioritize features in our design; implemented these features using CAD software, 3-D printers, and MATLAB for data analysis
- Created a business plan and pitch deck that were shown at various pitch competitions and won $50,000 in cash prizes
- Spirometer system was tested on over 500 patients in India and Uganda as part of a broader effort through Johns Hopkins to create easier access to healthcare in the rural areas of developing countries

Neonatal Resuscitation Project

- Part of an 8-person undergraduate team that attempted to define the optimal head-tilt angle for neonatal resuscitation by performing a retrospective MRI study on newborns at the Johns Hopkins Hospital
- Co-created a mat that would automatically place newborns in this optimal position so that midwives in developing countries could perform more successful resuscitations; presented research at the 2014 AAP Conference
- Co-authored a research paper around the retrospective MRI study that was accepted and published to a scientific journal (http://journals.plos.org/plosone/article/authors?id=10.1371%2Fjournal.pone.0151789)

SKILLS

- Java, JavaScript, HTML5, CSS3, AngularJS, SQL, Python, AWS, VB.NET, C/C++, Hadoop/HDFS, Spark, Linux
- Collaboration and Cross-Functional Expertise, UI and UX Improvements, MedTech, Stakeholder Analysis