Lucas Meyer

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SUMMARY

- Industrial Engineer with experience in Software Development and Broadcasting. Interested in research and innovation, presenting projects with application of different programming languages, new multimedia technologies, machine learning, computer vision and reinforcement learning algorithms.

QUALIFICATIONS

- Programming languages: C#, Visual Basic, Java, C++, C, Javascript, Python, PHP, HTML, CSS
- IDEs and Game Engines: Visual Studio, Netbeans, Unity
- Databases: MySQL, PostgreSQL, Firebird
- Multimedia technologies and libraries: DirectShow, ffmpeg, libVLC and custom software
- Machine Learning projects, deep learning and robotic frameworks: TensorFlow, Keras, ROS
- Productivity and Design Software: Office, MS Project, AutoCAD, Blender
- Statistics Software: R, Minitab and MATLAB
- Project Engineering and Broadcasting Engineering experience: IP and SDI video architectures and workflows, development of broadcasting software.
- Industrial Engineering, Project Management, Operations Research: Six Sigma, ANOVA, General Linear Model, Factor Analysis, Machine Learning applied in time-series studies.
- Languages: English (Fluent), Spanish (Fluent), Portuguese (Fluent), French (Intermediary)

EXPERIENCE

Senior Project Engineer | ESPN | January 2015 – May 2019

- Applications for live TV use on shows: touchscreen applications with C# .NET WPF/XAML (Visual Studio and Microsoft Blend), SQL (Firebird and MySQL), XML and TCP/IP communications. 3D applications with Unity3D and C#, JavaScript.
- Research of broadcasting software: video transcoding applications (C#, Python, PHP, HTML5), social media integration and character generators (Vizrt, Facebook, Instagram) using RESTful APIs, Swagger, JSON and multimedia libraries.
- Design and implementation of broadcasting production and distribution workflows with IP and SDI

Technology Project Manager, Intern | Rama Business | May 2014 – September 2014

- Marketing of technology companies, research for international business opportunities, public-private partnerships and funding resources. Creation of databases, communication systems and standardization

EDUCATION

B.S. Industrial Engineering | December 2016 | The University Center of FEI

- First place award for Bachelor Thesis in Industrial Engineering: Application of Quantitative Models for Patient Arrivals Forecasting in a General Out-patient Clinic. Study and application of quantitative statistical models and neural networks for time-series studies

B.S. Industrial Engineering | September 2014 | Mercer University

- Awarded academic program sponsored by the Brazilian Government. Studying abroad for 1 year in my field of study. Macon – Georgia, USA

Self-Driving Car Engineer Nanodegree | December 2017 | Udacity

- Development of software for vehicle detection and tracking, behavioral cloning with deep learning architectures, creation of Kalman and particle filters, PID controllers, behavior planning, forecasting projects
- Application and study of topics related to computer vision, deep learning, sensor fusion, path planning and robot controllers

September, 2019

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PROJECT EXAMPLES

Portfolio at https://lucasmeyer.weebly.com/

Open Source Technical Analysis Software

- The project is named OpenStock, licensed under GNU GPLv3. The software features real-time stocks data, possibility to analyze multiple charts at the same time, use of annotations and indicators for Technical Analysis, to create scripts and your own indicators to use with the software. Making use of Java, NetBeans, RESTful APIs and markup languages.

Multiviewer Application for IP Video Broadcasting Systems

- Creation of Multiviewer application for use with IP video based systems. Compatible with different containers and protocols such as MPEG-TS, RTSP, MP4 and codecs such as H264, H265, AAC, MPEG1L2 and others. Making use of .NET and multimedia algorithms.

Multimedia Conversion System

- Creation of multimedia conversion application used for automatic schedule and conversion of videos and audios. The suite is able to work with multiple codecs such as H264, DVCPRO HD, AAC, MPEG 1 Audio, etc, being used for multimedia workflows in-house. Making use of .NET, TCP/IP, PHP, CSS, HTML and multimedia algorithms and libraries.

2018 World Cup Touchscreen Application

- Creation of touchscreen application suite for live television production, containing realtime information of players and statistics, standings, brackets, weather, videos, and soccer field representations for analysis of 2018 World Cup soccer matches. Making use of C# .NET, markup languages, SQL, TCP/IP and Photoshop.

Self-Driving Car System Integration Project

- Creation of autonomous car system. Traffic lights, translation and rotation variables are taken into consideration, and also the comfort of the passengers inside the car, such as maximum jerk, acceleration and velocity values were applied while implementing the car controls. Computer Vision, Deep Learning, Sensor Fusion, Path Planning, Robot Controllers and other technologies and concepts were used.

Application of Quantitative Models for Patient Arrivals Forecasting

- Final thesis in B.S., the project presents different methods such as moving averages, sine curve regressions, ARIMA, and the application of recursive neural networks for time series studies. The case study uses historical data from a General Out-patient Clinic to forecast the arrival of patients using these different methods and to compare their efficiencies and errors, enabling further discussions in how to better schedule and stock the materials and human resources used by the hospital. Awarded first place at INOVA FEI, Industrial Engineering Thesis of 2016.

Character Generator Controlling System for The Olympic Games

- Creation of a custom controller and player for the Vizrt graphics system in-house, to enable easier use by the operators during Olympic Games Rio 2016, and reassuring that the graphics are in accordance with the standard created by Olympic Committee. Making use of .NET, RESTful APIs and Markup languages.