Eduardo Henrique de Mesquita Rodrigues

ehmr@cin.ufpe.br mobile number +55 1 81 99617 4140
github.com/dudurodrigues eduardohmrodrigues.github.io

EDUCATION

Universidade Federal de Pernambuco, Campus Recife
Undergraduate Student in Computer Science
December/2018

WORK EXPERIENCE

3/16 - Present	Voxar Labs Researcher/Software Developer Academic research focused in mixed reality, natural interaction, 3D interaction, multiple target tracking, computer graphics, computer vision, AR and VR (C++/Unity/C#) Site link: http://www.cin.ufpe.br/~voxarlabs/
8/15 - 2/16	SUATI Software Engineer (Intern) Refactoring of the data layer code (C#) Implementation of new features on the company's major product (C#) Site link: http://www.suati.com.br/
3/15 - 2/16	Young Talents for Science Researcher/Software Developer Academic research program where I created a computer vision algorithm using openCV to count bat populations using statistical approaches (C++) Site link: http://jovenstalentos.capes.gov.br/

TECHNICAL SKILLS

Programming Languages:

C# and C++	Experienced Programmer
Python	6 months
Java	6 months
SQL	6 months

Tools/Libraries:

- Unity Engine
- OpenCV
- OpenGL

Applications:

- Visual Studio
- GIT
- Terminal
- Team Foundation Server
- Eclipse

MAJOR PROJECTS

spring 2017	Mixed Reality TVs: This project address the interactivity with Smart TVs by using body gestures combined with the visualization modification through the Motion Parallax effect. This application is capable to fully calibrate the TV virtual environment with the real world, so the TV becomes a Mixed Reality display, showing its content coupled with the real world providing the user a new set of interaction techniques such as visually pinpoint and touch the virtual items of a TV menu by using metaphors based on natural physical interactions such as collisions, lights, shadows and magnetic attractions. (Unity/C#) Link: https://www.youtube.com/watch?v=I3RxzGjEnvI
Fall 2016	Unity Editor Tools: I have created a set of editor scripts with the things that I am learning about Editor Scripting. (Unity/C#) Link: https://github.com/eduardohmrodrigues/UnityEditorTools
Fall 2016	UnityRTGI: A script for Unity Engine where the user can import .obj extension files in execution time without the need of compiling the asset when the project is builded. You just have to enter with the link of the .obj file and the script will download it and render it on the scene. It also works with local files. (Unity/C#) Link: https://github.com/eduardohmrodrigues/UnityRTGI
Summer 2016	MONO: (In Progress) A game jam project that is a puzzle/platform game where the player changes the world colors between black and white to overcome the proposed challenges. (Unity/C#) Link: https://github.com/eduardohmrodrigues/MONO
Spring 2016	x:pression: (In Progress) A computer vision algorithm that make a real time tracking of the user's face and detect the user's actual emotion based on the extracted features. (C++/CLM-Framework) Link: https://github.com/eduardohmrodrigues/x-pression
Summer 2016	S.I.R.A.C: A computer vision algorithm that track bats in a clutter environment to account the population of their colony. The algorithm is able to start detections, treat wrong or lost detections and process the detections in progress. A 3D viewer was also implemented in order to help the analysis of the tracked flights by researchers in areas like biodiversity and biology. (C++) Link:https://www.youtube.com/watch?v=zpXMxKJCMdU&list=PLHdX4iz53ZAU38IcHIYPEJa5X-Zp1Y8oZ
Fall 2015	Features Extractor: A computer vision algorithm using OpenCV library that extract features of a given texture, capture the webcam image in real time, find the texture as a surface on the image, calculate the pose of the detected surface and project a 3D object on the surface using the texture as an AR marker. (C++) Link: https://github.com/eduardohmrodrigues/FeaturesExtractor
Fall 2015	3D Render: Basic rendering program of a 3D world with an object loader for .obj extension files using OpenGL. (C++) Link: https://github.com/eduardohmrodrigues/3D-Render

PUBLICATIONS

Scientific Article	Mixed Reality TVs: Applying Motion Parallax for Enhanced Viewing and Control Experiences on Consumer TVs Eduardo Rodrigues; Lucas Silva Figueiredo; Lucas Maggi; Edvar Neto; Layon Tavares; João Marcelo Teixeira; Veronica Teichrieb 2017 19th Symposium on Virtual and Augmented Reality (SVR) DOI: 10.1109/SVR.2017.48 IEEE Conference Publications
Scientific Article	Multi-objective Tracking Applied to Bat Populations Eduardo Rodrigues; João Marcelo Teixeira; Veronica Teichrieb; Enrico Bernard 2016 XVIII Symposium on Virtual and Augmented Reality (SVR) Pages: 155 - 159, DOI: 10.1109/SVR.2016.35 IEEE Conference Publications

AWARDS AND LEADERSHIP

2nd place in CodeCup Hackaton, July 2016
1st prize in CodeCup Hackaton, June 2015
Teaching assistent of algebra for computing class, September 2014
Teaching assistent of programming introduction class, January 2014