Daniel Popp Coelho

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Brazilian, married, born in 1991

Education:

University of São Paulo (USP) — São Paulo, Brazil
Master of Science in Biomedical Engineering — Sep 2016 – Sep 2020
Dissertation title: "Parallel and self-configuring implementation of the Level Sets segmentation algorithm". Keywords: CUDA, C++, genetic algorithms, image processing

Federal University of ABC (UFABC) — Santo André, Brazil
Double degree: Bachelor of Science in Biomedical Engineering and Bachelor in Science and Technology – GPA: 3,9 — May 2010 – Jun 2016
Thesis title: "Augmented reality visualization of a vocal fold tissue phantom for optical coherence tomography"

Gottfried Wilhelm Leibniz Universität Hannover (LUH) — Hannover, Germany
International exchange student for 14 months (2 semesters) — Feb 2014 – Mar 2015
Participation in the Master of Science in Biomedical Engineering Program

Experience:

Senior Software Engineer – 4D Pipeline — Remote
Developed products and plugins related to visualization, asset conversion and management, rendering and more for various enterprise clients. Implemented systems for conversion and processing of 3D mesh, animation and material data of multiple industry standard formats. Optimized systems and workflows related to management of 3D assets and Unreal Engine 4. Keywords: C++, Unreal Engine 4, Python, FBX, glTF, VRED, DeltaGen, Cinema 4D, GLTF, Alias, BIM IFC, USD — Mar 2018 – *Current*

Biomedical Engineer – Customize Life Medical Devices — Santo André, Brazil
Designed patient-specific, 3D-printable prosthesis, performing tasks such as prototype development with CAD, structural design, material and printing technique selection and 3D printing of the final product. Keywords: CAD, Autodesk Fusion360, Autodesk Meshmixer — Aug 2017 – Mar 2018

Software developer – Medical Harbour Medical Devices — Santo André, Brazil
Developed software capable of visualization, processing and 3D reconstruction of DICOM medical images. Keywords: C++/CLI, C#, Direct3D, UWP — May 2016 – Mar 2018

Software developer intern – Navegatium Medical Devices — Santo André, Brazil
Developed software capable of visualization, processing and 3D reconstruction of DICOM medical images. Keywords: C++/CLI, C#, Direct3D — Aug 2015 – Apr 2016

Research project – Institut für Mechatronische Systeme – LUH — Hannover, Germany
Title: "OCT-based Augmented Reality for Tumor Visualization in Live Camera Views". Developed during an exchange student program at the Institute for Mechatronic Systems of Leibniz Universität Hannover. Keywords: C++, VTK, ITK, multimodal registration — Oct 2014 – Mar 2015

Research project – Biomedical Engineer - UFABC — Santo André, Brazil
Title: "Physiological Control of an Implantable Ventricular Assist Device". Scholarship from Fundação de Amparo à Pesquisa do Estado de São Paulo (FAPESP). Developed during undergraduate program at UFABC. Keywords: C, Arduino, electrocardiogram — Oct 2012 – Sep 2013

Publications:

Author of research paper – Biomedical Engineer - UFABC — Portugal, Jun 2020
Title: “Parallel Implementation of the DRLSE Algorithm”, presented at the 17th International Conference on Image Analysis and Recognition (ICIAR 2020), Portugal, 2020, https://doi.org/10.1007/978-3-030-50516-5_3.

Co-author of research paper – Biomedical Engineer - UFABC — Santo André, Brazil, Jul 2012
Title: “Physiological Control of an Implantable Maglev Centrifugal Blood Pump Using Disturbance Force Observer”, presented at the 7th Technology and Medical Sciences International, Belo Horizonte, Brazil, 2012.

Skills:

Programming languages: C++ (proficiency), C (proficiency), Python (proficiency), Rust (experience), Typescript (experience), Javascript (experience), C# (familiarity), MATLAB (familiarity)

Software and IDEs: Unreal Engine 4 (proficiency), Visual Studio 17/19 (proficiency), Visual Studio Code (proficiency), QtCreator (familiarity), Pycharm (familiarity), Unity (familiarity)

Libraries and toolkits: OpenGL (experience), WebGL (experience), Vue (experience), WebAssembly (familiarity), DirectX (familiarity), VTK (experience), CUDA (experience)

Others: Git (proficiency), Perforce (experience), Jenkins CI (experience), Arduino (experience), UNIX-based operating systems (familiarity), Microelectronic circuit design (familiarity)

Languages:

Brazilian Portuguese: First language, C2

English: Fluent, C2

German: Intermediate, B2 (TestDaF on Feb 10, 2015: Leseverstehen 4, Hörverstehen 5, Schriftlicher Ausdruck 3, Mündlicher Ausdruck 4)

Interests:

3D graphics, VR and AR, WebAssembly, artificial Intelligence, space and astronomy, gaming.