

RAFAEL HENRIQUE TIBÃES

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Software developer with experience in machine learning, computer vision, biometrics and high-performance computing. Graduated in Computer Science and now pursuing a master's degree.

SKILLS

C/C++, Julia, Python, Swift, CUDA
OpenCV, TensorFlow, SciKit Learn, Pandas

Unix, Docker, Qt, SQL, NoSQL, Flutter
Portuguese, English and German

CODING EXPERIENCE

MACHINE LEARNING ENGINEER AT WOLK (07/2018 – 08/2018)

- Algorithms for logistics optimization applied to agriculture and heavy industry, reducing a complex combinatorial problem (NP-hard) to a polynomial one;
- Regression models to predict production given resources and weather.

COMPUTER VISION SCIENTIST AT AKIYAMA (04/2015 – 06/2018)

- Algorithms to adjust the parameters of the newborn fingerprint matcher, based on ridges and valley thickness, to overcome the deformations caused by aging;
- Software to acquire and manipulate a database of fingerprint images;
- Algorithms for face detection and analysis, such as segmentation, rotation and crop;
- Algorithms for face segmentation using Intel RealSense RGBD images;
- Integration with proprietary biometrics SDKs, such as Innovatrics.

COMPUTER VISION RESEARCHER AT IMAGO RESEARCH GROUP (08/2008 – 03/2015)

- Algorithms for object tracking and motion analysis, based on optical flow;
- Algorithms for action recognition and scene understanding based on Gaussian Mixture Models (GMM) of optical flow;
- Software for Pan Tilting Zoom (PTZ) cameras manipulation based on image motion;
- Algorithms for high-performance 3D face detection using parallel programming on GPUs and RGBD images from Microsoft Kinect, achieving almost 10x speedup.

EDUCATION

Master's in Computer Science (ongoing)
Bachelor's in Computer Science (2012)
Machine Learning Engineer (2018)

Federal University of Bahia (UFBA, Brazil)
Federal University of Paraná (UFPR, Brazil)
Udacity Nanodegree

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