GAUTHIER BOUYJOU

3D Graphics Engineer

📞 +33 6 18 48 05 69 📧 gauthierbouyjou@aol.com 🔗 **linkedin:** www.linkedin.com/in/gauthier-bouyjou

🔗 **github:** github.com/hiergaut **portfolio:** hiergaut.github.io 📍 Toulouse / France

EXPERIENCES

Entrepreneur (Medical application)

Independant 📅 07/2024 - Présent 📍 Blagnac / France

6 months
- Creation of a device to make an ultrasound scanner compatible with 3D for automatic diagnosis or patient care

Software engineer (OpenSource)

Toulouse Tech Transfer 📅 02/2024 - 06/2024 📍 Toulouse / France

5 months
- Software development C++
- Open Source (GitHub, GitLab)
- CI (GitHub Action)
- Unitary tests C++ (Catch, Quality)
- Documentation C++ (Doxygen, Sphinx)

Research engineer (Medical application)

IRIT (Institut de Recherche en Informatique de Toulouse)

📅 02/2022 - 08/2023 📍 Toulouse / France

18 months
- Ultrasound calibration, ultrasound phantom creation, 3D printing assembly (FreeCAD, SolidEdge, Blender)
- FDM and resin printing
- Sensor flow synchronisation (TCP/IP C++)
- Virtual and augmented visualisation (Unity3D, HoloLens 2, MRTK)

Research engineer (Offline rendering)

IRIT (Institut de Recherche en Informatique de Toulouse)

📅 10/2020 - 10/2021 📍 Toulouse / France

12 months
- Creation of shaders for the Arnold engine renderer in order to implement a specific rendering research article (shadow layers)
- Compositing with Natron
- Creation of plugin for the Maya software (Autodesk)

Internship (Real-time rendering)

DIGINEXT 📅 03/2020 - 08/2020 📍 Toulouse / France

6 months
- Test of the possibility of integrating a library (bgfx) allowing abstraction from the various graphics APIs (D3D11, D3D12, OpenGL, Metal, Vulkan, GNM) in an existing C++ serious industrial engine
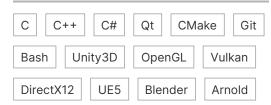
Aeronautical assembler

Airbus 📅 05/2012 - 08/2015 📍 Toulouse / France

3 years
- Fitter on Airbus FAL and for subcontractors on the outskirts of Toulouse (workshops, assembly line)

Aeronautical assembler internship

Airbus 📅 10/2011 - 04/2012 📍 Blagnac / France

LANGUES

English B1-B2 ●●●○○ French Native ●●●●●

COMPÉTENCES

C | C++ | C# | Qt | CMake | Git

Bash | Unity3D | OpenGL | Vulkan

DirectX12 | UE5 | Blender | Arnold

PUBLICATIONS

A Framework for Real-Time Visualization in Augmented Reality

📅 2024

🔗 ieeexplore.ieee.org/document/10793459

Creation of communication protocol (TCP/IP C++ Sockets)

📅 2024 🔗 github.com/T-PLAY/hub

Efficient Stratified 3-D Scatterer Sampling for Freehand US Simulation

📅 2023

🔗 pubmed.ncbi.nlm.nih.gov/37824323/

Creation of custom rendering engine (OpenGL, Qt, C++)

📅 2020

🔗 github.com/hiergaut/Goliath-Engine

ÉDUCATION

Entrepreneurship / Entrepreneurial studies

BGE Sud-Ouest (Toulouse)

📅 09/2023 - 12/2023

Master's degree IGAI, Computer Graphics and Image Processing

Université Paul Sabatier Toulouse III

📅 2019 - 2020

License degree in Computer science

Université Paul Sabatier Toulouse III

📅 2016 - 2018

CQPM, Aeronautical assembler

Lycée Saint-Exupéry (Blagnac)

📅 2013

BAC STI, Mechanical Engineering

Lycée International Victor Hugo (Colomiers)

📅 2011