JEAN-BAPTISTE MORICE

Software Engineer

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SUMMARY

I am a software engineer specialized in computer graphics and digital image processing. My main interests are the development of engines and visualization tools in C++.

SKILLS

Programming :

C++   C#   Python   Java   PHP   HTML & CSS

Computer Graphics :

OpenGL   GLSL   Vulkan   Unity

Libraries :

Qt   OpenCV

Databases :

MySQL   PostgreSQL   Microsoft SQL Server

Operating Systems :

Windows   Linux

Tools :

Git   CMake   Conan   GitLab   GitLab CI/CD   Jenkins   SonarQube   Visual Studio

Personal :

Teamwork   Communication   Project Management   Agile Software Development

EDUCATION

Engineering Degree in Computer Science

École Supérieure d'Ingénieurs de Rennes (ESIR)

📅 2015 – 2018

A french engineering degree in computer science with a specialization in computer graphics and digital image processing from a competitive engineering school attached to the University of Rennes 1.

Courses:

- Rendering
- Digital Image Processing
- Compilation for Digital Imaging
- Human-computer Interactions
- Image Classification
- Video Compression
- Computer Vision
- Special Effects
- Video Games

Two-year University Degree in Computer Science

Institut Universitaire de Technologie de Laval

📅 2013 – 2015

A two-year university degree in computer science. Approximately equivalent to a Diploma of Higher Education in the UK, or an Associate's Degree in the US.

Courses:

- Algorithms, Data Structures and Programming
- Object-oriented Programming
- Software Architecture
- Human-computer Interactions
- Databases
- Operating Systems
- Computer Networks

Baccalauréat Général Scientifique Mention Européenne

Lycée Saint-Martin

📅 2010 – 2013

French secondary school diploma. Approximately equivalent to A Levels in the UK, or an High School Diploma in the US.

Diplôme National du Brevet

Collège Saint-Hélier

📅 2006 – 2010

Approximately equivalent to GCSE'S under C Grade / GNVQ Intermediate, in the UK, or 9th Grade in the US.

EXPERIENCE 💼

Technical Leader

Siradel

📅 March 2022 – December 2023   📍 Saint-Grégoire, France

Technical oversight of two projects: a 3D visualization software for geographical data and a new similar undisclosed project, both developed in C++ and C#; as well as regular maintenance and evolution work.

Responsibilities and missions :

- Coordinate the team's software architecture efforts and plan technical studies
- Responsible for the setup, maintenance and evolution of project tooling (build system, CI/CD, unit and integration testing, technical documentation)
- Establishing and enforcing development standards
- Ensuring knowledge sharing
- Training of new recruits
- As well as my previous activities as a software engineer

Software Engineer

Siradel

📅 September 2019 – March 2022   📍 Saint-Grégoire, France

Maintenance and evolution of a 3D visualization software for geographical data developed in C++ and C#.

Responsibilities and missions :

- Developing new features and implementing bug fixes
- Code reviews and manual testing
- Contributing to the functional analysis and technical specification work
- Customer support

Virtual Reality R&D Engineer Intern

B<>COM

📅 March – September 2018   📍 Cesson-Sévigné, France

As part of this end-of-study internship for my engineering degree, I took part in an exploration of new research topics for a research and development laboratory. I was tasked with studying the possible interactions in virtual reality between synthetic 3D content (produced by a graphic designer) and 3D content captured from reality (photogrammetry, 360-degree photos and videos, etc.), and to develop demonstrators highlighting the identified technological barriers which could be the subject of new research projects.

Responsibilities and missions :

- Scientific and technical watch
- Writing of a 3D reconstruction techniques state-of-the-art
- Classification of content hybridization possibilities
- Development of three prototypes: tangible interactions in virtual reality with objects reconstructed using photogrammetry, enhanced omnidirectional content to allow selection, navigation in virtual reality in different type of contents captured from reality

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3D Rendering Engineer Intern
SOGITEC

📅 June – September 2017   📍 Bruz, France

As part of this internship, I assessed the relevance of the Vulkan graphics API as a replacement for OpenGL in a real-time 3D rendering engine used for flight simulation. I was tasked with implementing it on a subset of the engine, then evaluating the potential performance gains, and finally proposing a methodology to perform the API change over the entire engine.

Responsibilities and missions :

- Implementation of the Vulkan graphics API on a basic subset of the real-time 3D rendering engine
- Performance gains assessment
- Assessment of the efforts involved in performing the API change over the entire engine
- Definition of a strategy to perform the graphics API change

IT Project Manager Intern
FIT

📅 June – August 2016   📍 Rennes, France

As part of this internship, I contributed to initiate and plan an improvement project for the company's information system. I was tasked with performing needs assessments and expressing functional specifications for the improvement of the current Enterprise Resource Planning software (ERP) and for the purchase of a Customer Relationship Management software (CRM). I was also charged with various system administration and maintenance tasks, as well as improving reports from a Business Intelligence (BI) system.

Responsibilities and missions :

- Analysis and assessment of requirements with every department for an update of the ERP
- Planning and budgeting of future changes with internal managers and the external service provider in charge of the ERP
- Analysis and assessment of requirements with the sales department for the purchase of a CRM
- Maintenance and evolution of Business Intelligence reports based on ERP data extractions
- System administration and user support

Software Developer Intern
MPO

📅 April – August 2015   📍 Vilaines-La-Juhel, France

As part of this end-of-study internship for my two-year technical degree, I was tasked with the functional analysis, design, and development of a software interface (a web-service) between a Desktop Publishing (DTP) workflow engine and a Manufacturing Execution System (MES).

Responsibilities and missions :

- Needs collection and analysis
- Writing of the functional and technical specifications for a solution
- Development of the solution

VOLUNTEERING 👥

Events Coordinator
ISATI (ESIR's Student Office)

📅 2015 – 2016

Planning, budgeting, scheduling and management of various events aimed toward ESIR students'.

AWARDS 🏆

Industrial Project Winner of the 2018 Enterprise Award
ESIR & Sopra Steria

📅 December 2018

Award received for the work done during our industrial end-of-study engineering project. This project, commissioned by Cooper Standard, aimed to establish a sample preparation protocol for syntactic foam porosity analysis and develop an accompanying image analysis tool.

"Disability Awareness" Challenge
Nuit de l'Info 2013 & Oracle

📅 Novembre 2013

Award received for the writing of a report detailing various recommendation to improve accessibility for people with disabilities when designing user interfaces. This work was the result of a challenge proposed by the Oracle company during the "Nuit de l'Info 2013" hackathon.

LANGUAGES 🌐

- French – Native speaker
- English – Advanced (TOEIC 990/990 - CEFR C1)
- German – Elementary (CEFR A2)

INTERESTS 🎵

- Music
- Reading
- Video games : Outer Wilds, A Plague Tale: Innocence, Mirror's Edge
- Board games
- Sports : Cycling
- Travelling : England, Ireland, Germany, Turkey, Czech-Republic