Corentin DUMERY

Master Student, NUS

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github.com/CorentinDumery

Interest

3D geometry | Computer vision | Computer Graphics Research | Operations Research Algorithms | Teaching | Cultural exchange | Physics simulation

Technical Skills

- Strong C++/Python, Java, C
- OpenGL Rendering, Blender
- Git projects and team working
- HTML, CSS, JavaScript, Node.js
- Latex, Photoshop, InDesign
- Linux, Windows
- x86 Assembly, JavaCC, OpenCL
- D3, Tableau

Languages

French — Native

English — Fluent

TOEFL ibt (2018) 111/120
Cambridge CPE (2014) C2 level

Chinese — Basic

HSK2 (2019) 196/200

Education

2019-2020 **M. of Computing** — National University of Singapore
Algorithmic and 3D courses, 4.83/5 CAP (first semester)

2017-2020 **M. of Engineering** — Télécom Paris
Specialization in Operations Research, 3D and Interactive Systems, GPA 4/4

2015-2017 **French Preparatory classes MPSI/MP*** — Lycée Pothier

Recent Projects

2019- **Design of Implants for Skull Reconstructive Surgery**
- Created a 3D geometry program that automatically generates skull implants
- Implemented highly efficient state-of-the-art 3D Flattening techniques to improve 3D printing process
- Worked in collaboration with professionals from Osteopore

2019 **B-Mesh Modeller** (*link to video example*)
- Created a novel modelling software inspired by a recent research paper
- Implemented 3D operations to generate a base mesh following the skeleton defined by the user with linked spheres

2019 **Dimensionality Reduction with Fast J-L Transform**
- Implemented and compared state-of-the-art dimensionality reduction methods on datasets of up to 5000 dimensions
- Interpreted the results and conclusion on what method to use under given circumstances

2018 **Creation of a mini imperative langage**
- Defined a grammar using JavaCC allowing simple arithmetic operations and function calls
- Implemented compiled operations in x86 Assembly

2016-2017 **Modelling and optimizing the area allocation of agricultural exploitations** (*link to French video presentation*)
- Researched an appropriate model for the area allocation process in an agricultural exploitation
- Compared existing optimization methods in terms of quality and computing time
- Optimized allocation with real-world data from the last 50 years and estimation on the following years

Work Experience

08.2018 **Teacher Intern at Global Fellowship Nepal**
- Created teaching material in collaboration with the rest of the team
- Engaged students through interactive and tailored lessons
- Repaired and maintained the computer lab

07.2018 **Participant in Huawei's Seeds For The Future 2018**
- Explored the world of ICT in Shenzhen, presentation of Huawei's vision of ICT and 3G/4G/5G

2017-2018 **Tutor at FEDEEH**
- Tutored teenagers with cognitive disabilities from EREA Crocé-Spinelli, Paris
- Collaborated with other tutors to create instructive and fun-filled sessions