Julio Cesar Ramirez Paredes

Profile

Bachelor of civil engineering, expert in engineering solutions for fluid mechanics and computational fluid dynamics in challenging problems. Interest in fluid mechanics and programming languages. Outstanding learning capacity, motivation to continue learning and orientation to achieve results in my career.

Social Network

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Mario Cavagnaro
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Linkedin
Github
Pucp
Website
Resume

Languages

English
Portuguese

Programming

C++
Fortran
Python

Education

- **Pontificia Universidad Católica del Perú** — San Miguel ,PE
  Bachelor's Degree in Civil Engineering — *Jul 2019*

Work Experience

- **Hidro Mayu** — Huacho, PE
  Hydraulic equipment maintenance support — *Nov 2022*
  - **Fluid mechanics and open channel hydraulics**: Maintenance and training to teachers and students about the equipment of the Universidad Nacional José Faustino Sánchez Carrión's hydraulics laboratory
- **Centro de Investigación y Tecnología del Agua** — Barranco, PE
  Research Assistant — *Sep 2019 - Nov 2021*
  - **Urban air quality**: Numerical simulation of the navier equations for incompresible newtonian flow in air fluid in urban environments using Openfoam.
  - **Dam break**: Numerical modeling of the shallow water equation for incompresible newtonian flow in dam break escenarios using Telemac-2D.
- **Universidad de Ingeniería y Tecnologia** — Barranco, PE
  Teaching Assistant — *Aug 2019 - Nov 2021*
  - **Mathematics III**: Solid understanding of linear algebra and numerical methods.
- **Pontificia Universidad Católica del Perú** — San Miguel, PE
  Jefe de Práctica — *Mar 2019 - Jun 2019*
  - **Open Channel Hydraulics**: Solid understading of channel morphology, hydraulic engineering and sediment transport.
- **MJ & Asociados Water Resources Consulting** — Lima, PE
  Practicing civil engineer — *Mar 2019 - Jun 2019*
  - **River flood**: Observation of flood zone in the Moquegua river under extreme flood condition to investigate the resilience of the infrastructure.

Proyects

- **Turbulent parabolic velocity**: Development of a new boundary condition in the Openfoam library, based on c++. Vertical profile from a predefined parabolic velocity with randoms fluctuations over the time. This pertubations allow to work with LES and DES in unsteady flows.
- **Convert STL format to XYZ**: Code in fortran that allows to take a mesh in STL format and generate an XYZ file. The elements of XYZ file can be used in programs such as qgis, excel, blukenue.
- **Turbulent schmidt number with scalar transport equation**: Implementation of the scalar dissipation equation for a pollutnat with the parameters of the schmidt y prandtl number. Code in Openfoam, based on c++.

Software Skills

- **Programming Languages**: C++, Fortran, Python, R, Bash y Lisp
- **Softwares**: Emacs, Pointwise, Tecplot, Qgis, Telemac, Openfoam, Blender, Latex, Ubuntu, Git y Aws.
- **Tiping**: Typing speed of 65 wpm - Monkeytype, Keybr.

Extra-curricular Activities

- Summer Work and Travel program - 2015: California y Utah.
- Member of Gemra Pucp - 2018 y 2019