BrunoBenkel

Web version

Contact

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github.com/bleaktwig

Languages

Native or Bilingual:
Spanish, English

Elementary:
Italian, Norwegian,
Chinese

Programming

Expert:
C, Python, Java

Proficient:
Bash, C++, Haskell

Elementary:
JS, MIPS Assembly, R

Tools & Libraries

Linux
Git
ROOT
LaTeX
QT + PySide2

Experience

2018–Now — **CCTVal** — Valparaíso, Chile
R&D Computer Engineer
- Developer of standard HEP data analysis tools used in Run-Group E.
- Head of the Forward Micromegas Tracker alignment team.
- Head of the Drift Chambers offline reconstruction optimization team.
- Lead developer of the configuration, calibration, alarms, and front-end mechanical ventilator software systems.
- Blockchain developer for small-scale energy democratization project.

2020 — **Upwork** — Remote
Freelance Software Developer
- Software developer in IoT and electroencephalography processing software.
- Various side-jobs in web development, mainly focused in front-end and UX design work.

2016–2018 — **UTFSM** — Valparaíso, Chile
Computer Architecture UTA
- Head of course's teaching assistants.
- Teacher of weekly classes in tandem with the course's professor.
- Designer, supervisor, and evaluator of monthly hardware laboratory experiences and homework.

2018 — **UTFSM** — Valparaíso, Chile
Artificial Intelligence UTA
- Supervisor and evaluator of the final project of the course.
- Assistant in test evaluation.

2017–2018 — **w/ Ben Tatum** — Los Angeles, US
Field Service Engineer
- Assistant in electricity and computer network installations at residential and commercial buildings in Los Angeles.

Education

2021–Now **M.Sc.** in High Energy Physics — UTFSM, Chile

2017–2019 **Title (M.Sc. equivalent)** in Computer Engineering — UTFSM, Chile

2012–2017 **B.Eng.** in Computer Engineering — UTFSM, Chile

Publications

2022 Co-author in **First CLAS12 measurement of DVCS beam-spin asymmetries in the extended valence region** — CLAS Collaboration

2022 Co-author in **A multidimensional study of the structure function ratio $\sigma'_{LT}\sigma_0$ from hard exclusive pi+ electro-production off protons in the GPD regime** — CLAS Collaboration

2022 Co-author in **First Measurement of Lambda Electroproduction off Nuclei in the Current and Target Fragmentation Regions** — CLAS Collaboration

2022 Co-author in **Alignment of the CLAS12 central hybrid tracker with a Kalman Filter** — CLAS Collabration

2022 Co-author in **Observation of Azimuth-Dependent Suppression of Hadron Pairs in Electron Scattering off Nuclei** — CLAS Collaboration

2022 Co-author in **Exclusive π^- Electroproduction off the Neutron in Deuterium in the Resonance Region** — CLAS Collaboration

2022 Co-author in **Beam-Recoil Transferred Polarization in K^+Y Electroproduction in the Nucleon Resonance Region with CLAS12** — CLAS Collaboration

Interests

Professional. High energy physics, scientific computing, data analysis, blockchain technologies, optimization, heuristic algorithms, machine learning, neural networks.

Personal. Piano, music production, woodworking, D&D, worldbuilding, design, juggling.