José Bravo

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Education

Bachelor of Arts, Applied Mathematics
Bachelor of Arts, Physics
California State University, Sacramento - May 2021

Relevant Coursework

Classical Mechanics, Optics, Thermodynamics, Electronics and Instrumentation, Advanced Physics Laboratory, Biology I, General Chemistry I & II, Mathematical Methods, Real Analysis, Complex Analysis, Abstract Algebra, Programming Methods, Probability and Statistics, Statistical Programming, Big Data

Laboratory Skills

- Chemistry: titration, spectroscopy, reflux, distillation, acid-base interactions.
- Electronics: linear and non-linear circuits, sensors and transducers, operational amplifiers, basic digital circuitry, and introduction to computerized data acquisition.
- Optics: geometrical optics, single and double slit interference and diffraction, Michelson interferometer, polarization, He-Ne lasers, photomultipliers, error analysis.

Technical Profile

- Programming proficiency with Python (Spyder), R (RStudio), and Julia (Juno). Capable with Java (BlueJ), C++, and SQL.
- Software literacy include Wolfram Mathematica, LaTeX, Bash (Unix shell), Git version control, HTML, XML, Markdown, MS Office Suite. Used best practices with respect to memory efficiency by monitoring performance and identifying bottlenecks in a given program or process.
- Employed principles of OOP in building, iterating, validating, and troubleshooting (debugging) algorithms and models.
- Experience with statistical modeling, principles, techniques, and applications complemented by knowledge of major statistical software, statistical programming, and data visualization.
- Good knowledge of big data analytics via training in cloud computing. Used S3 from AWS to store data and Athena (AWS) to query data using standard SQL. Also used AMI and EC2 instances from AWS to manipulate large datasets for exploratory data analysis, distributional tests, dimensional reduction through PCA, clustering using k-means, natural language processing, and data plotting. Familiar with stream sampling and implementations of pipelines. Introduced to statistical learning models.
- Quality technical writing and public speaking skills as well as a high level of interpersonal skills.
- Languages: Spanish (Read/Speak)

Projects

Topological Flips - Senior Project — Summer 2020 – May 2021

- Studied Lie Groups to describe skateboard stunts as algebraic structures. Our group produced a theorem to describe skateboard tricks from four fundamental stunts/elements in $SO(3)$.
- Used SymPy to create a catalog of stunts using symbolic matrices. Then created Python software to allow users to view rotational matrix or render a GIF of a stunt.

Professional and Work Experience

Monterey Bay Aquarium Gift and Bookstore - Monterey, CA — May 2012 – June 2018
Sales/Stock/Warehouse Associate

National Union of Healthcare Workers - San Francisco, CA — January 2009 – June 2009 | March 2010 – August 2010
Organizer

SEIU United Healthcare Workers - West - Sacramento, CA — October 2007 – January 2009
External Organizer

UA Plumbers & Steamfitters Local 159 / UC Berkeley Labor Center - Martinez/Berkeley, CA — June 2007 – August 2007
Organizer - Intern / Labor Summer Internship

SUCCESS Consortium - Dixon, CA — February 2007 – June 2007
Academic Facilitator

UC Davis Cross Cultural Center - Davis, CA — September 2006 – February 2007
Chicano Community Organizer Intern