Iván Sepúlveda
+1-714-724-4958
iesepulveda@outlook.com

Education

University of San Francisco Graduated August 2019
Bachelor of Science - Physics GPA: 3.05

Experience

Solar Mosaic LLC - Oakland, CA *June 2021 - Present*

– Identify performance trends, monitor risk KPI's, and conduct loan-level analysis to isolate causes for variances between risk indicators and expected performance
– Establish and maintain a feedback loop with credit policy and operations to enhance credit quality and balance loan origination volumes for a growing portfolio
– Manage and support monthly and ad-hoc presentations regarding asset performance

L-Egant Solutions, LLC - Irvine, CA *October 2019 - December 2022*

– Produced software tools providing real-time video capture/streaming
– Created video data transformation utilities (i.e. statistical representations
– Developed methods to analyze, compile, and compare raw image data

Mechanics Bank Auto Finance - Irvine, CA *June 2021 - Present*

– Assisting in the development and ongoing analysis of servicing strategies
– Developing, designing and analyzing portfolio trends and assessing risk of those trends
– Producing and analyzing risk, operational, demographic and other reports as necessary

Freelance - Computer Science Tutor *June 2021 - Present*

– Tutored a fifth-grade student in basic Computer Science principles, promoting computational thinking and problem-solving skills
– Developed engaging modules to introduce programming and algorithms, sparking early interest in Computer Science

Research

Plasma Characterization *June 2021 - Present*

– Wrote a Monte-Carlo Python script that simulates electrons propagating through Argon plasma, tracking their position, energy, and collisions
– Utilize information gathered to obtain ideal plasma etching parameters

Rideshare/Transportation Modeling *October 2019 - December 2022*

– Built a dynamic model of rideshare prices by day of the week based on Uber data
– Integrated real public transit data into model as a consumer option

Electron Emission Modeling *June 2021 - Present*

– Used COMSOL Multiphysics to develop a simulation of a femtosecond laser releasing pulses of light at a sharp metal alloy tip
– Experimented with parameters such as heat, alloy composition, and pulse length

Iván Sepúlveda
+1-714-724-4958
iesepulveda@outlook.com

Relevant Coursework

- Software Development
- Introduction to Computer Science I & II
- Statistical & Thermal Physics
- Calculus & Analytic Geometry I/II/III
- Methods of Mathematical Physics
- Advanced Business Analytics

Publications

Journal Articles

[1] C. T. Chavez et al. "Measurement of 2D density profiles using a second-harmonic, dispersion interferometer". In: *Review of Scientific Instruments* 94.2 (Feb. 2023), p. 023503. ISSN: 0034-6748. URL: https://doi.org/10.1063/5.0119896.

[2] M. Nikolic et al. "Applicability of optical emission spectroscopy techniques for characterization of Ar and Ar/O2 discharges". In: *Journal of Physics D: Applied Physics* 54.27 (Apr. 2021), p. 275203. URL: https://dx.doi.org/10.1088/1361-6463/abf61c.