Jonathan A. Pedroza, PhD
14032 Gridley Rd
Norwalk, CA, 90650
☎ (562) 547-5729
✉ cpppedroza@gmail.com
🌐 jonathan-a-pedroza.netlify.app

06 June 2022

Dear S.A.F.E,

I am pleased to submit my application for the opening of Research Analyst II at S.A.F.E. This position is of great interest due to S.A.F.E's mission to use statistical analyses and reporting to inform policy change and safety. I believe my skills in statistical analyses, report writing, and dashboard creation, along with my willingness to learn can be beneficial to S.A.F.E's mission goals.

Aligned with the responsibilities of the position, I have expertise in conducting inferential statistics and machine learning methods using R. I have several years of experience conducting inferential statistics, including regression analyses, such as structural equation modeling and mixed-effect modeling. I have used inferential statistics to answer research questions about psychometrics of measures, adolescent and adult health behaviors, food access in rural Oregon, and other topics through published peer-reviewed journals and poster, paper, and virtual presentations at regional and national conferences. Through these mediums, I have used inferential statistics to discuss the relevance and potential implications of findings to audiences of academics and practitioners. While my background is academic in nature and I have been trained predominately in inferential statistics, I have sought out courses and a specialization in data science to learn more about machine learning. Through these data science courses, I have learned data wrangling, data visualization, dashboard and report creation, and machine learning algorithms in R; however during my personal time I have been teaching myself these topics in Python. I have used competitions, like Kaggle, to practice these skills in both languages and am constantly researching more about machine learning through books and online resources.

My expertise in these techniques also translate to my teaching and mentoring experiences. Over the past year, I have been teaching inferential statistics to undergraduate students. There, I have advanced the program curriculum by incorporating R rather than solely SPSS. In addition to teaching inferential statistics, I taught experimental design to students. In this course, I taught students how to create an ethical research study by creating a true experiment through recruitment of other students. Topics included whether their research question would be best answered using a between- or within-subjects design, how to conduct their own analyses, and how to construct a written report of their findings.

In addition to my experiences using R and Python for modeling purposes, I have advanced competency using R for the past 4 years to create visualizations of analytic findings using dashboards and reproducible reports. In collaboration with the Vice Provost of University of Oregon's Graduate School, I created a dashboard to created growth models examining if increasing graduate teaching employees as instructors increased undergraduate student success. The dashboard included summarized analyses and visualizations exemplifying the relationship. Additionally, I have sought out resources to teach myself SQL and have been practicing developing queries using Google Cloud Platform's BigQuery platform..

I believe I can be a great asset to S.A.F.E with my skills and expertise in inferential statistics, while learning more about utilizing these techniques within a business environment. This opportunity will augment my current experience, knowledge, and skills through dissemination of findings to promote policy change. Thank you for your consideration.

Best regards,

Jonathan A. Pedroza (JP), PhD