To the Hiring Committee,
I am writing to express my interest in the Scientist-Data and Modeler position at First Solar. With a Master's degree in Electrical Engineering from North Carolina State University and extensive experience in data analysis, machine learning, and statistical modeling, I am excited about the opportunity to contribute to your team and support organizational strategy and operations through data-driven insights.

In my role as a Data Science Intern at Native Nibbles, I conducted comprehensive data extraction, cleaning, and transformation, which aligns well with the responsibilities of extracting and transforming data from existing relational database management systems. My experience with SQL and relational databases, along with my proficiency in Python and data visualization tools like Tableau, has equipped me to perform exploratory analysis and support project needs effectively. I conducted comprehensive data extraction, cleaning, and transformation, leading to the development of a clustering-based approach using DBSCAN. This improved prediction accuracy and processing speed for customer behavior analysis. Additionally, I developed a COWRF model that enhanced processing speed by 39.17% and achieved a 97.2% accuracy rate, showcasing my ability to deliver impactful data solutions. This experience aligns well with your requirement for proficiency in querying databases and visualizing insights effectively. This role required a deep understanding of statistical methods and the ability to apply them to real-world business problems, similar to the responsibilities at First Solar. My experience in designing and conducting experiments, analyzing data, and presenting actionable insights to management has prepared me well for this role.

In my previous role as a Deep Learning Engineer at the Vázquez Research Group, I developed and integrated complex data pipelines, applied advanced machine learning techniques, and communicated findings effectively to stakeholders. My experience in Python, SQL, and data visualization tools like PowerBI and Tableau aligns well with the technical requirements of this position. Additionally, I have worked extensively with data science and machine learning packages such as Numpy, Pandas, Scikit-learn, TensorFlow, and PyTorch, which are essential for developing and evaluating predictive models.

Key accomplishments that demonstrate my fit for this position include:

- Biomedical Signal Processing: Developed and deployed a neonatal seizure detection system utilizing scalable machine learning architecture, achieving high sensitivity and rapid inference times.
- Predictive Analytics: At Native Nibbles, improved model accuracy and processing speed through advanced clustering and optimization techniques, resulting in significant business impact.

- Statistical Analysis and Model Development: Conducted comprehensive data analysis and built predictive models to support business objectives, leveraging techniques such as regression, clustering, and time series analysis.

I am particularly excited about the opportunity to work at First Solar, where I can leverage my skills to build and deploy machine learning models, conduct advanced statistical analysis, and contribute to process improvement initiatives. I am confident that my background in data science, combined with my strong communication and presentation skills, will allow me to make a meaningful impact on your team.

Thank you for considering my application. I look forward to the opportunity to discuss how my background and skills align with the needs of First Solar.

Thanks and regards,
Ashwini Muralidharan
M.S in Electrical Engineering
+1 6692788612