

Dear Hiring Team,

I am writing to express my strong interest in the Data Scientist position at Waymo. With over seven years of experience applying advanced machine learning techniques to complex data challenges across both academia and industry, I offer a unique combination of scientific rigor and practical business impact.

At AWS, I led model evaluation, fine-tuning, and prompt engineering initiatives for an internal AI documentation tool that improved typical role production by approximately 30%. By analyzing documentation health metrics dashboards, I isolated meaningful signals from seasonal noise, driving strategic discussions on what impacts customer experience. My cross-functional collaboration skills enabled me to identify process inefficiencies, test solutions, and implement improvements that positively impacted the onboarding experience for nearly all new AWS users.

My background as an astrophysicist provides me with exceptional capabilities in handling massive datasets. During my postdoctoral research at Shanghai Jiao Tong University, I built ML pipelines in Python that processed terabyte-scale cosmological data containing over 8 billion data points. I developed automated testing infrastructure achieving above 90% reliability in model validation and leveraged distributed computing on supercomputer clusters to identify subtle patterns in astronomical datasets.

What particularly draws me to Waymo is your innovative approach to generating data through state-of-the-art simulation technology alongside on-road data collection. This paradigm presents exciting challenges in estimation and experimental design that align perfectly with my background in physics and data science. I'm excited about the opportunity to contribute my expertise in statistical modeling, large-scale data processing, and ML model evaluation to help drive innovation in rigorous vehicle performance evaluation and safety assurance. My technical toolkit includes:

- Advanced statistical modeling and machine learning techniques (Markov chain Monte Carlo, Gaussian Process Regression)
- Python programming with data science libraries (scikit-learn, pandas, matplotlib)
- Experience with AWS cloud services
- Proven ability to translate complex technical concepts for diverse audiences

I bring a unique perspective that combines scientific depth with practical business acumen. My experience spans from hyperparameter tuning for complex algorithms to implementing accessibility improvements that achieved 100% compliance with government agency requirements for my service. This versatility allows me to both dive deep into technical problems and maintain focus on real-world impact.

I would welcome the opportunity to discuss how my skills and experience could benefit your team at Waymo. Thank you for considering my application.

Matthew Fong