# Liam (Phuc) Quach

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## Education

**Master and Bachelor of Science in Statistics, Minor in Data Science** — San Luis Obispo, CA
*California Polytechnic State University* — *Sep. 2021 – Jun. 2025*

## Technical Skills

**Languages**: Java, Python, SQL, R, SAS
**Developer Tools**: Git, AWS, VS Code, Visual Studio, PyCharm, IntelliJ
**Libraries**: Pandas, NumPy, Matplotlib, Tidyverse, Sk-learn, Kera

## Experience

**Data Analyst** | ***SQL, SAS*** — June 2023 – Sep. 2023
*Acumen LLC* — *Los Angeles, CA*

- Investigated and verified the accuracy of data assumptions by conducting thorough analysis and identifying 10% of invalid data points, ensuring reliable research findings.
- Generated detailed reports for the research team by processing billions of rows of data using multicore processing, resulting in a 30% increase in efficiency compared to previous methods.
- Identified patterns and trends in missing data points through comprehensive analysis, optimizing data collection processes and reducing missing data errors by 15%.

**Data Scientist** | ***Python, SQL, QuickBase, PowerBI*** — June 2022 – Sep. 2022
*Novavax* — *Gaithersburg, MD*

- Pioneered the development of a data lineage methodology, contributing to a 30% improvement in data traceability and integrity.
- Conducted an in-depth evaluation of the financial and strategic implications of data quality issues, resulting in a cost savings of approximately 20% by identifying and rectifying data inaccuracies.
- Led an exhaustive analysis of root causes using the FMECA (Failure Mode, Effects & Criticality Analysis) method, reducing system failures by 25%.
- Thoroughly examined the data cycle in QuickBase and SAP, leading to a 15% increase in operational efficiency through the identification and elimination of bottlenecks.

**Computer Science and Statistics Tutor** — Dec. 2022 – Present
*Cal Poly Writing and Learning Center* — *San Luis Obispo, CA*

- Provide tutoring sessions in the areas of Computer Science and Statistics, from basic to advanced levels.

## Projects

**Predictive Modeling for Breast Cancer Subtypes** | *Python, Sklearn, Keras, Pandas* — May 2023 – Jun. 2023

- Applied ANOVA for feature selection; improved model performance.
- Constructed Logistic Regression model using Cross-Validation; achieved 95% accuracy.
- Built and validated Neural Network model using Cross-Validation; enhanced accuracy to 96%.

**Rental Car Application** | *Python, mySQL, AWS* — Nov. 2022 – Dec. 2022

- Designed data schema and hosted it on AWS RDS; improved data management.
- Employed SQL and Pandas for data manipulation and analytics; derived key insights.
- Implemented secure user authentication system; strengthened data security and privacy.

**NBA Prediction Model** | *Java* — Mar. 2023 – Apr. 2023

- Created predictive model using KNN and 30-year historical data; forecasted NBA victories.
- Tested Euclidean and Manhattan distance metrics; optimized KNN accuracy.
- Employed cross-validation techniques; mitigated over-fitting and enhanced model reliability.
- Achieved an accuracy rate of 84% in win forecasts.