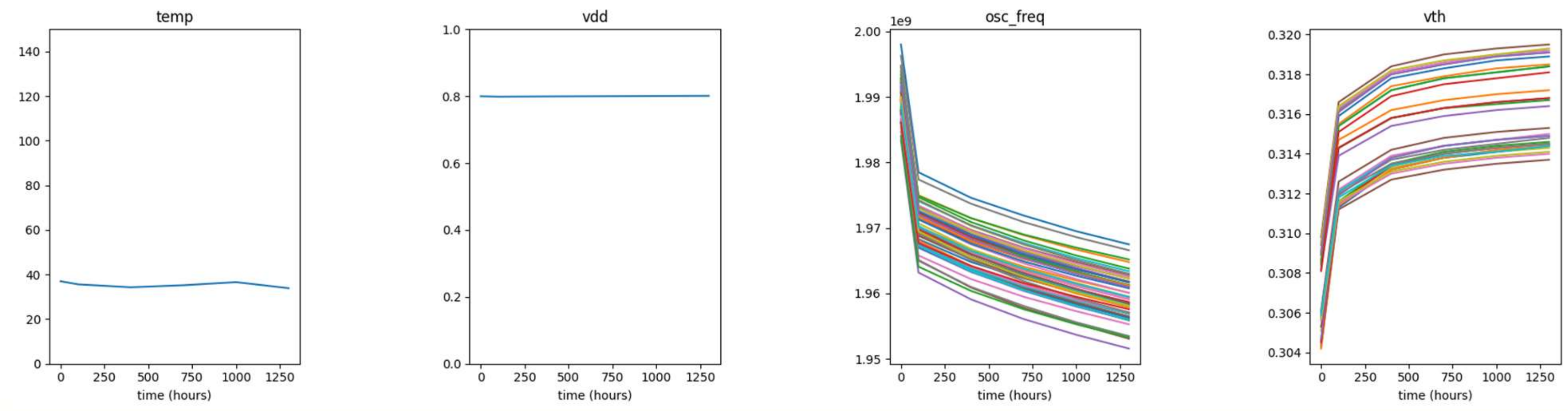
# Visualizing Uncertainty in Lifespan Predictions

Ian Hill – CPSC 547 Project Pitch

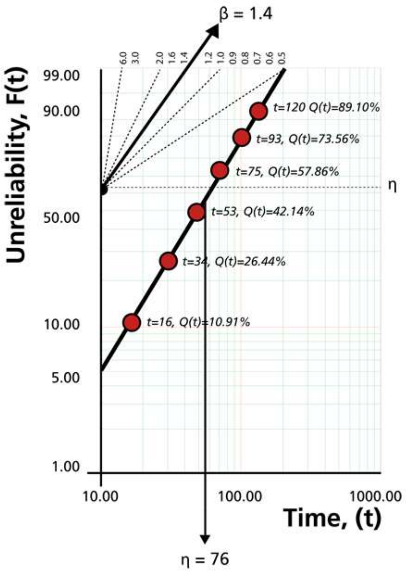
# The Dough

- Reliability engineers need to analyze IC test data and lifespan predictions
- Test data tracks degradation of different electrical parameters
- I have real data, and can simulate other datasets we need for the project
- Preference to develop tool using Python



# The Cream Filling

- Derived quantities are what make this project interesting
- User needs to predict lifespan, compare models, analyze sensitivity
- Topic is a rabbit hole of complexity, can scope project to our abilities



Reliawiki, "The Weibull Distribution," 2018. [Online]. Available: https://reliawiki.org/index.php/The_Weibull_Distribution

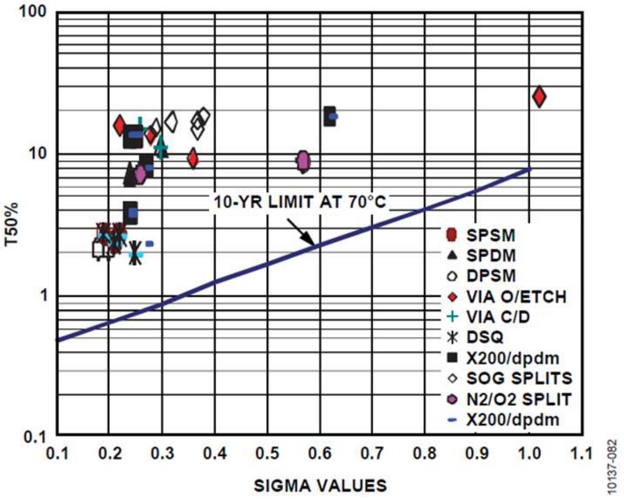


*Figure 55. Gate Dielectric Reliability During Process Development*

"Reliability handbook," Analog Devices, Tech. Handbook UG-311, Rev. D, 2014.