

# NeuroLink Analytics

## Predictive Performance Modeling & Motor Skill Forecasting

NeuroLink Analytics is a data science project that treats human typing as a high-frequency data stream. By analyzing over **20,000 personal typing sessions** (exported from Keybr.com), this system models the acquisition of muscle memory to predict future performance milestones.

## Core Insights

- **Target Forecasting:** Uses Linear Regression to project the exact session count required to hit **130 WPM** and **99% accuracy**.
- **HCI Bottlenecks:** Identifies character-level latency and error "hotspots" (e.g., your difficulty with the `v` and `z` keys).
- **The Warm-up Effect:** Statistically proves that peak performance is reached after a specific number of daily warm-up sessions.
- **Precision vs. Velocity:** Models the convergence point where high-speed typing meets high-accuracy stability.

## Projected Milestones

- **Goal:** 130 WPM
- **Estimated Date:** May 2026
- **Required Effort:** ~11,000 more sessions (~67 hours of practice)

## Tech Stack

- **Analytics:** Python (Pandas, NumPy)
  - **Machine Learning:** Scikit-Learn (Linear Regression)
  - **Visualization:** Matplotlib, Seaborn
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