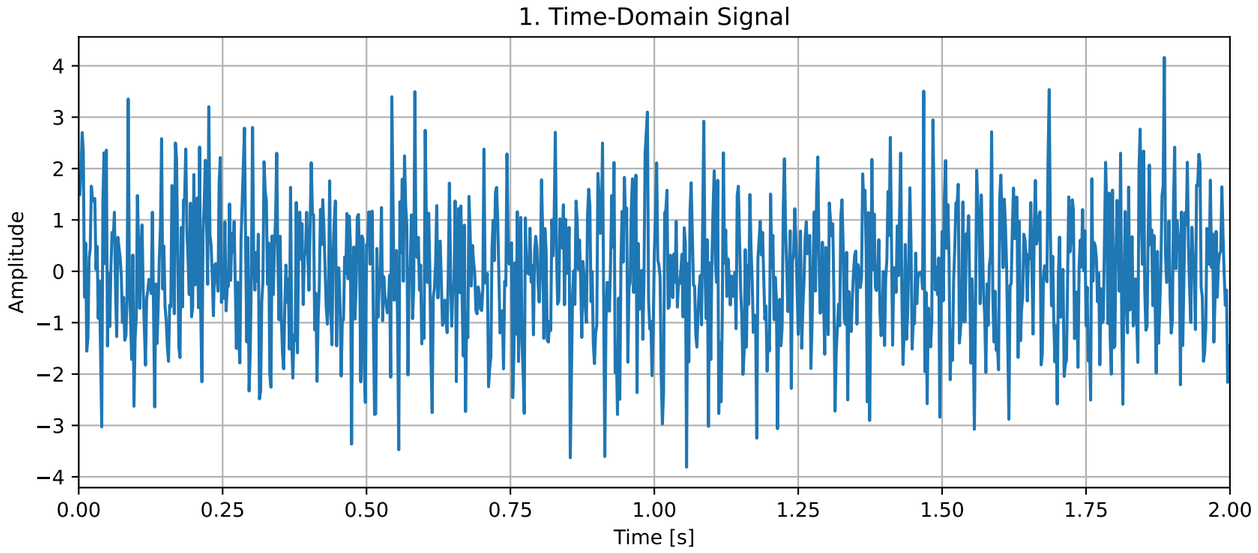
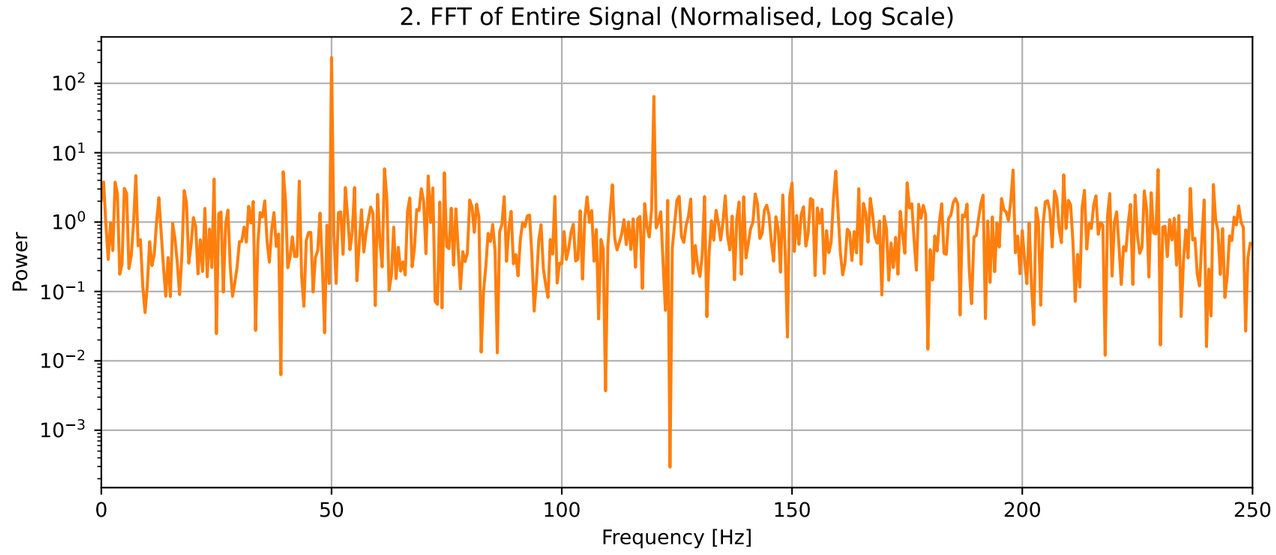
Welch Estimate vs FFT: Step-by-Step Illustration

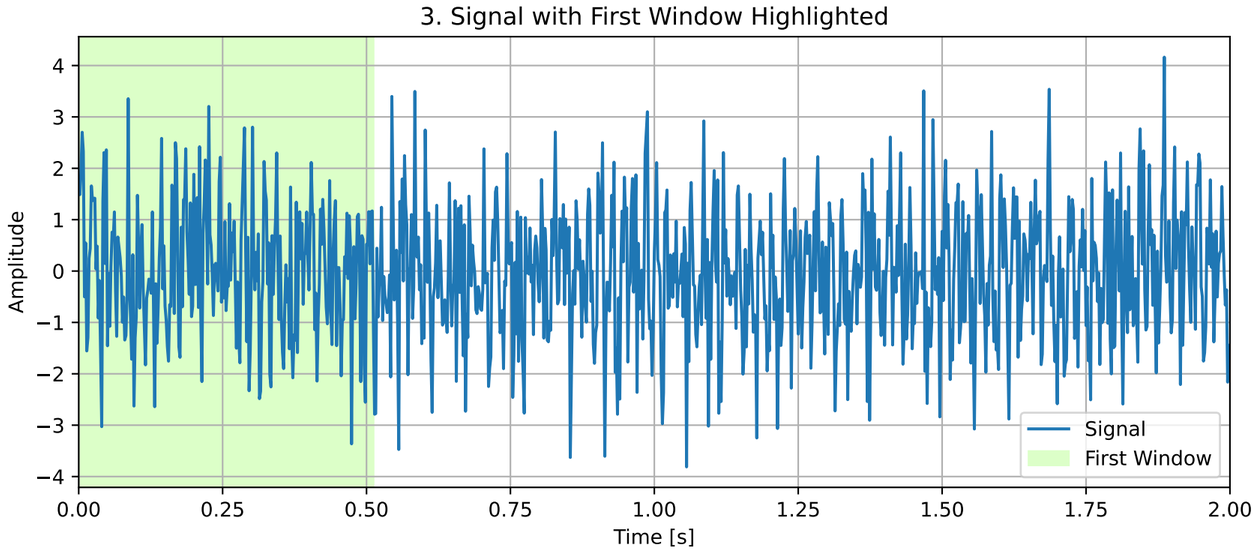
1. Time-Domain Signal



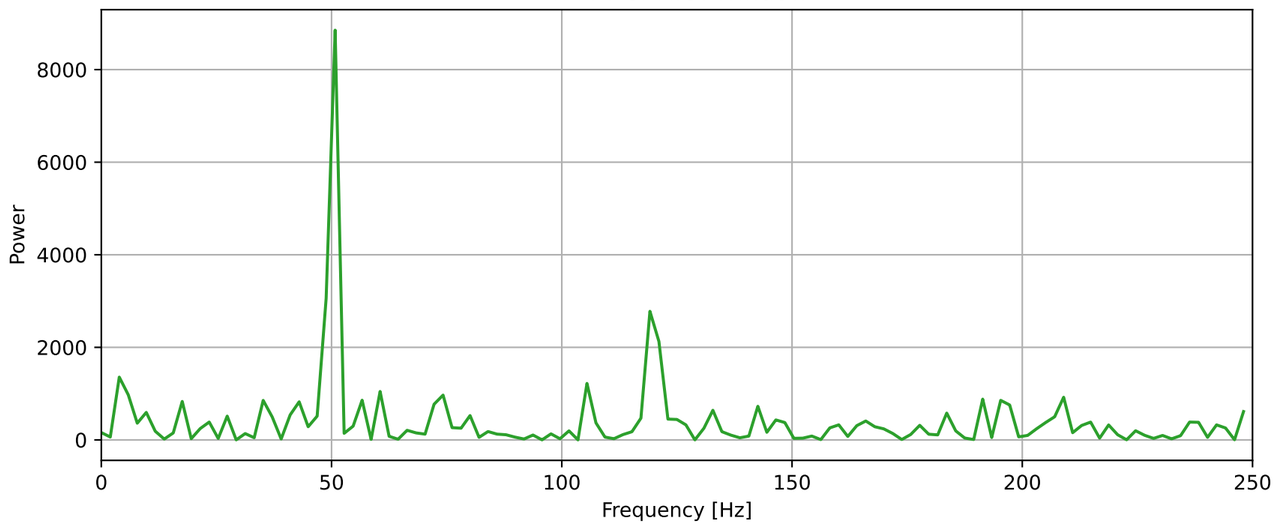
2. FFT of Entire Signal (Normalised, Log Scale)



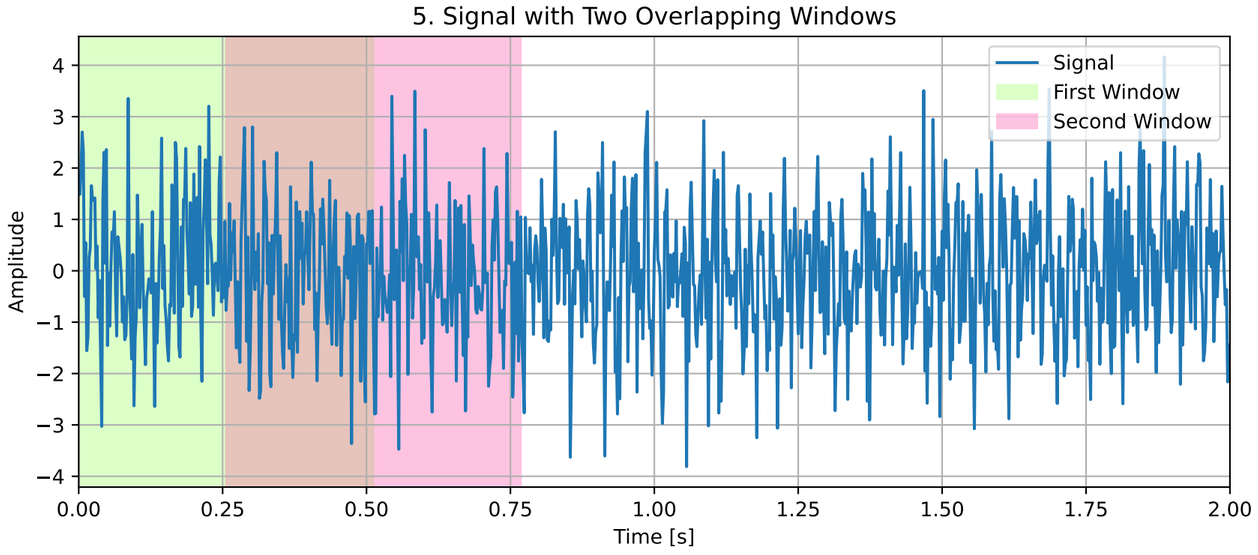
3. Signal with First Window Highlighted



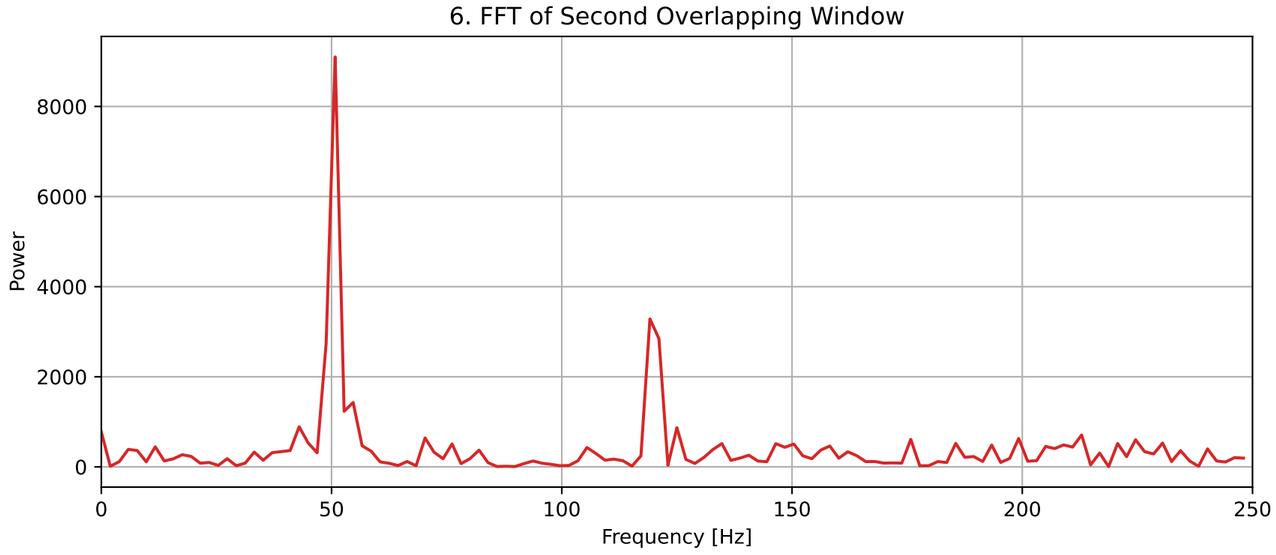
4. FFT of First Window



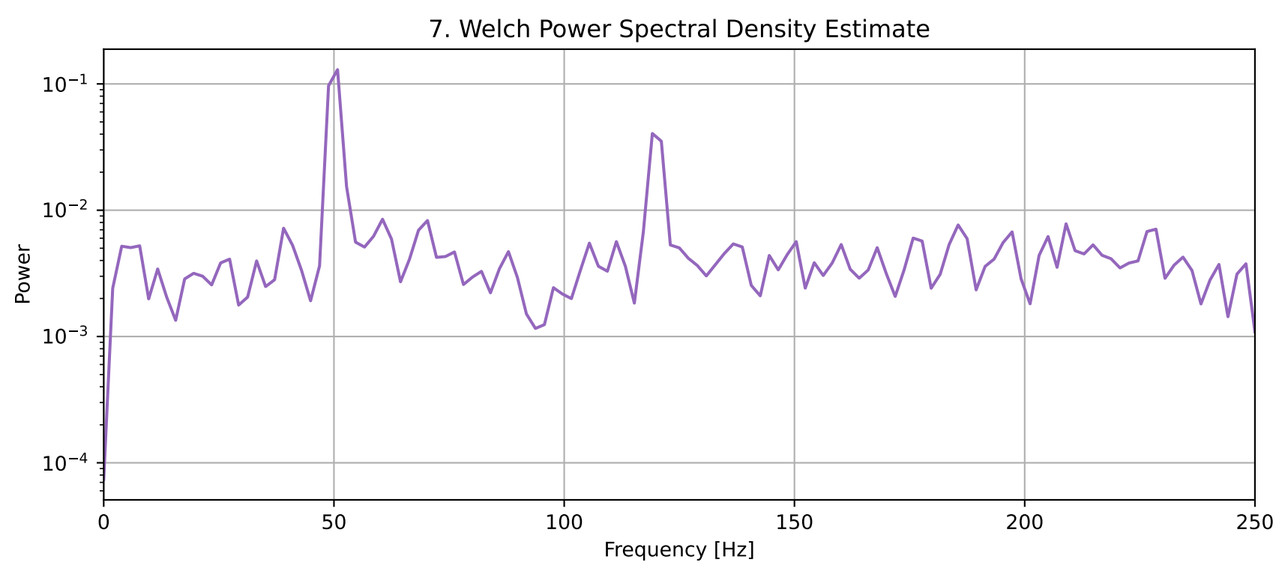
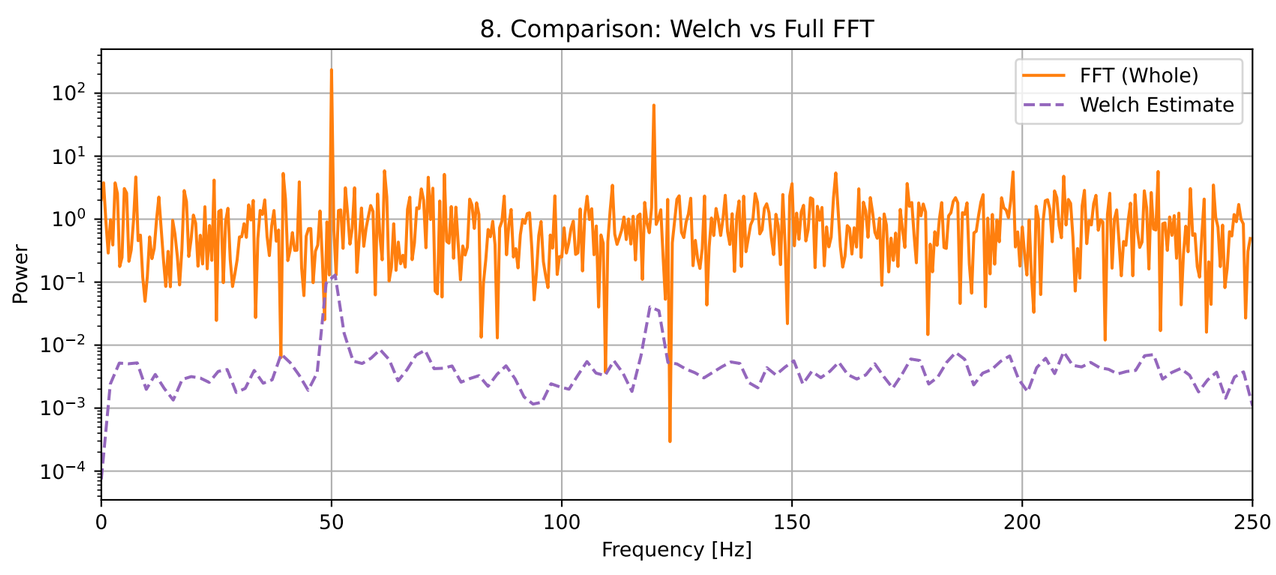
5. Signal with Two Overlapping Windows



6. FFT of Second Overlapping Window



7. Welch Power Spectral Density Estimate



8. Comparison: Welch vs Full FFT