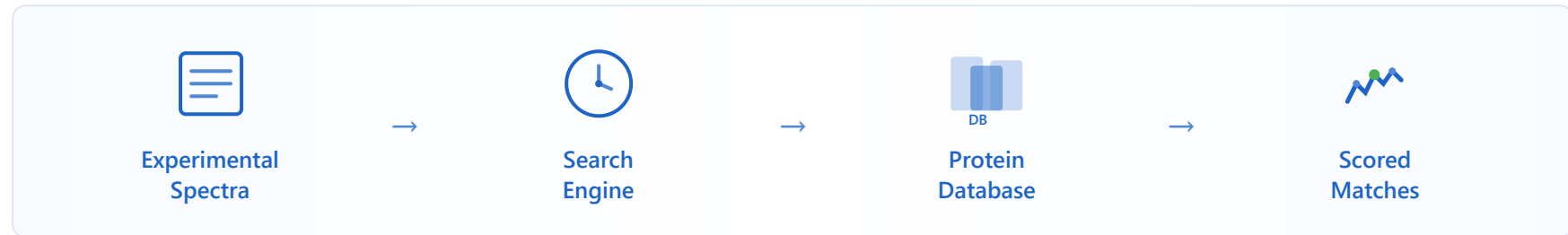


## Database Searching



### Search Engines

- Mascot, SEQUEST, X!Tandem
- MaxQuant, Proteome Discoverer
- Each with unique algorithms

### Parameter Optimization

- Mass tolerance settings
- Enzyme specificity
- Missed cleavages allowed

### Decoy Databases

- Reversed/shuffled sequences
- Estimate false positives
- Quality control

### Modifications

- Fixed modifications (e.g., carbamidomethylation)
- Variable modifications (e.g., oxidation)
- Balance between sensitivity and specificity