

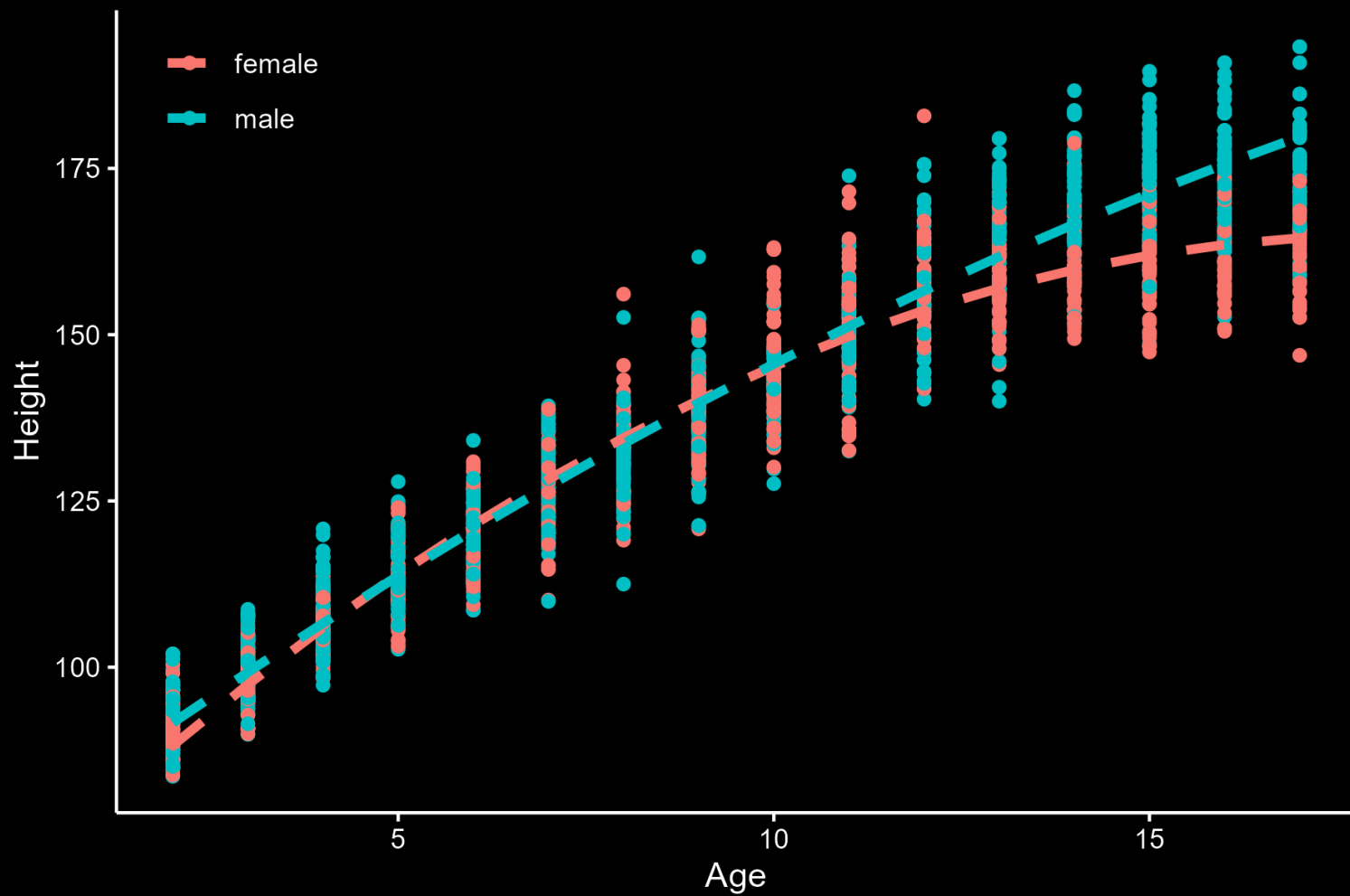
CRITICIZING THE MODEL AND CHECKING ASSUMPTIONS

ASSUMPTIONS

- Linearity
- Residuals are independent (also of the X's)
- Constant variance (homoscedasticity)
- No perfect multicollinearity
- Residuals are normally distributed

NORMALITY ASSUMPTION

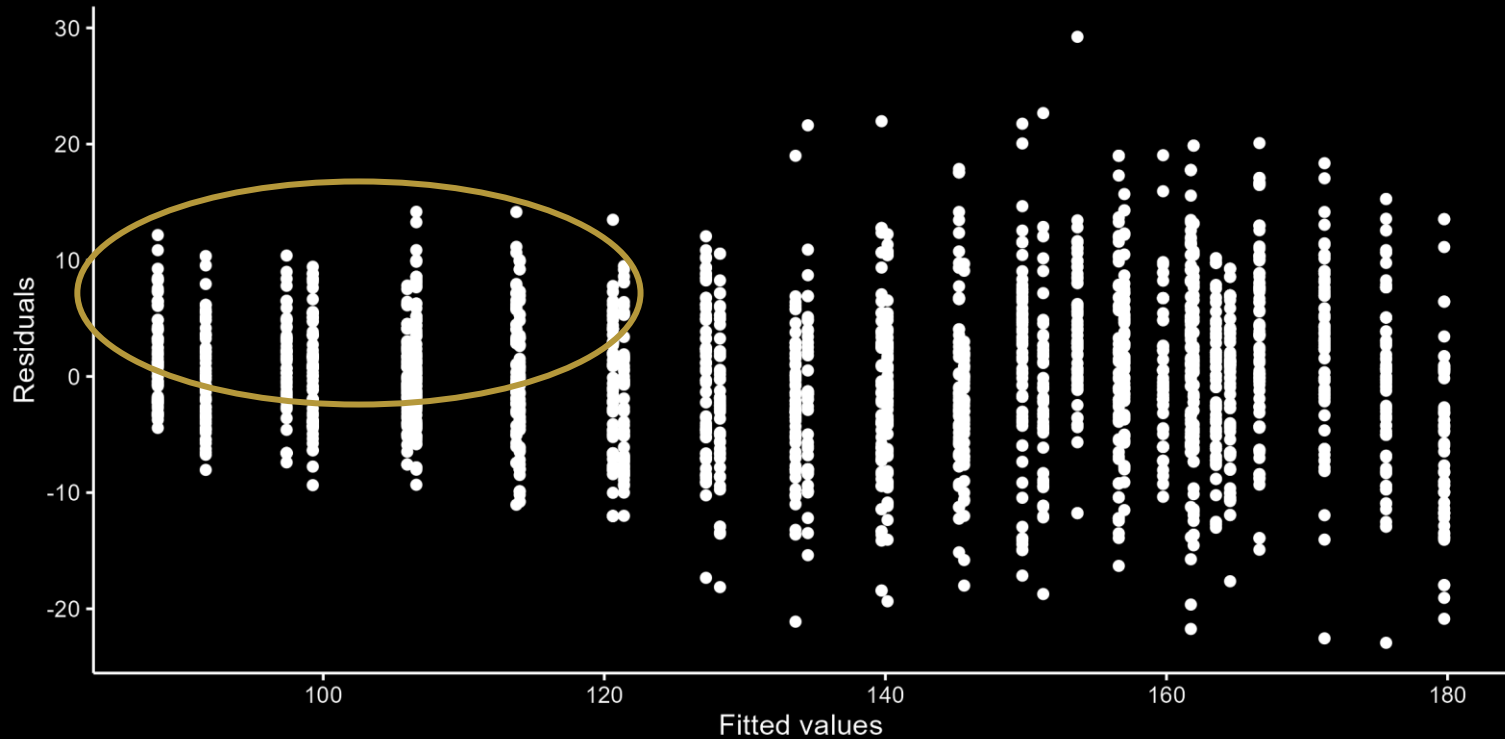
Task	Normality Needed?
Estimating coefficients	✗ No
Making point predictions	✗ No
Prediction intervals	✓ Yes
Confidence intervals / tests (small n)	✓ Yes
Confidence intervals / tests (large n)	✓ / ✗ Not strictly, CLT helps



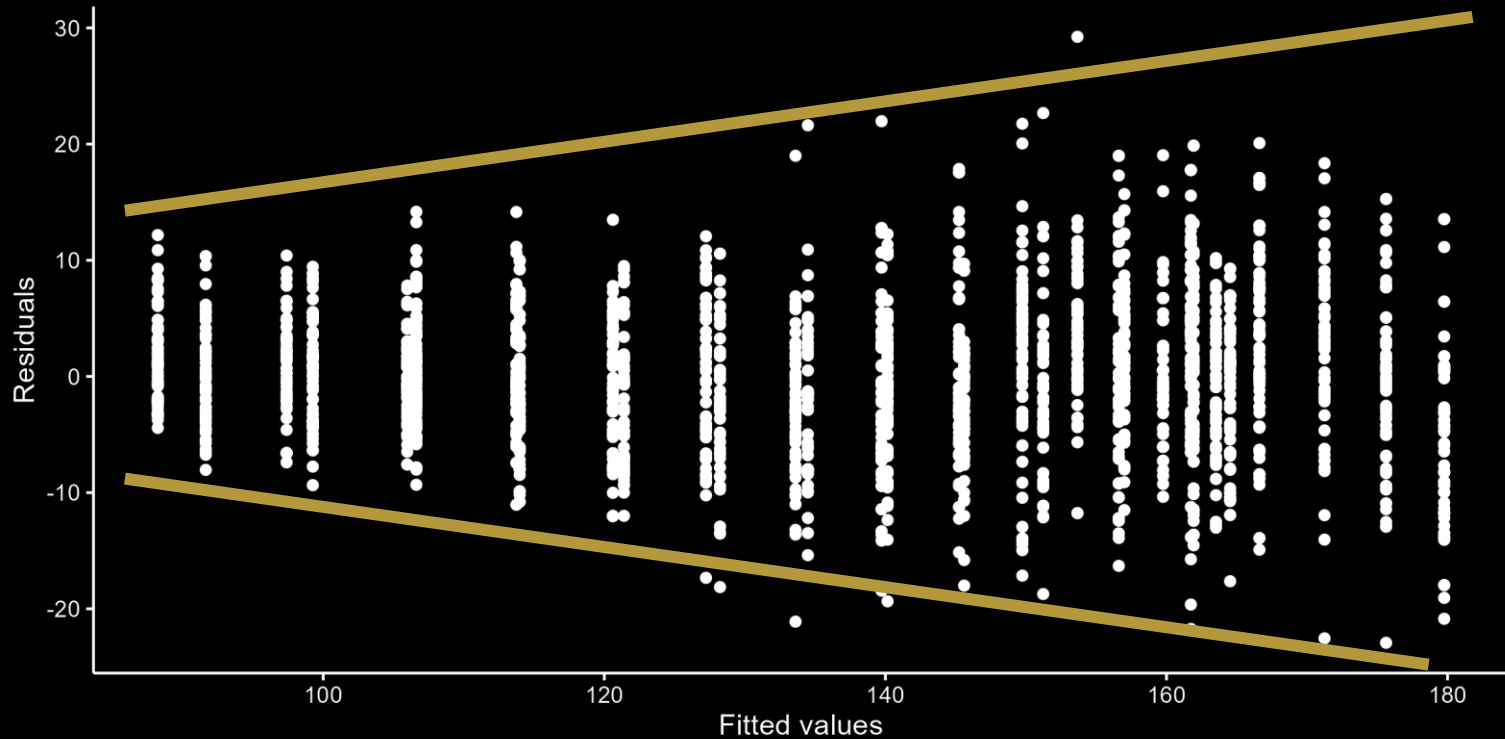
NHH
TECH3



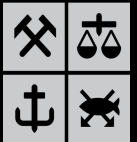
INDEPENDENCE AND CONSTANT VARIANCE



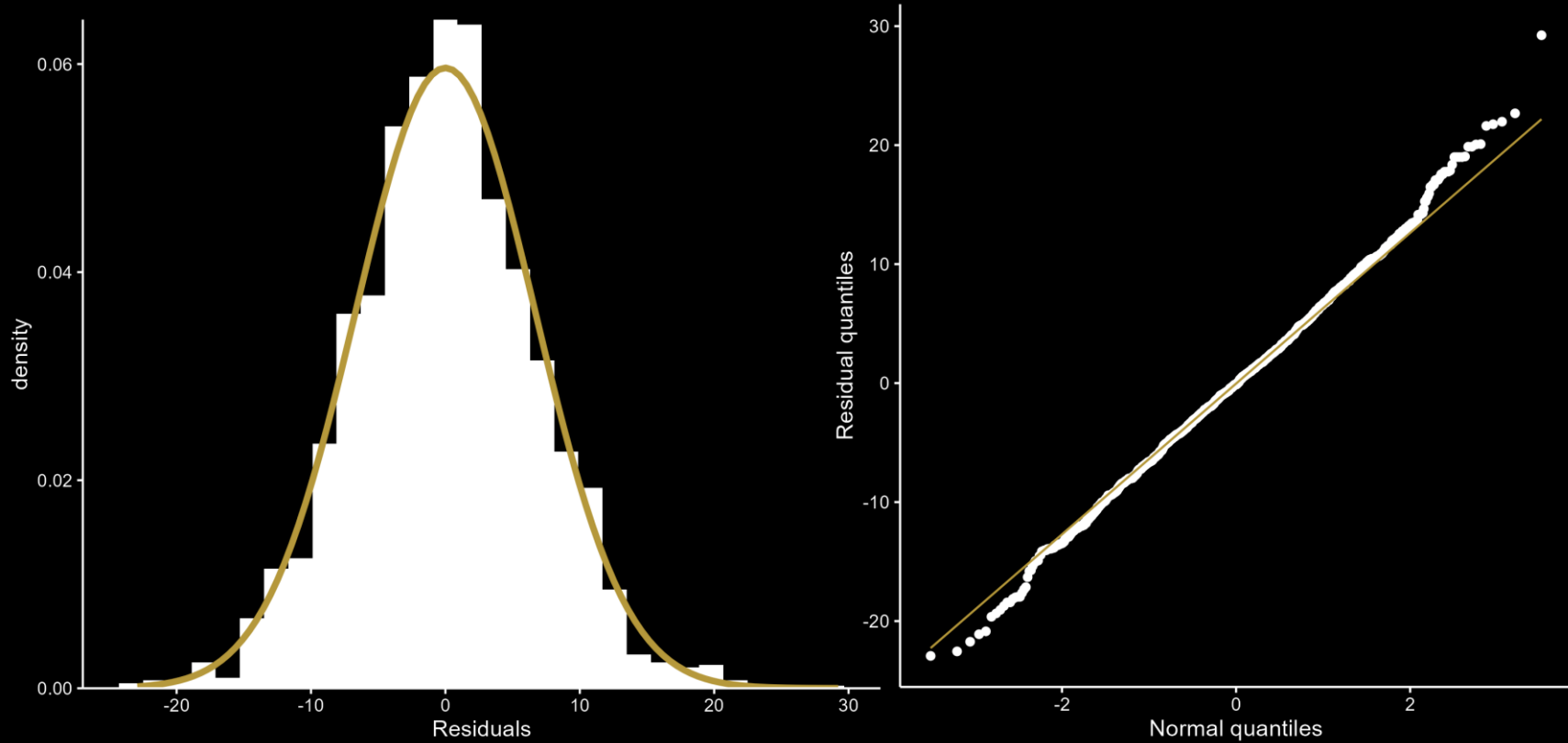
INDEPENDENCE AND CONSTANT VARIANCE



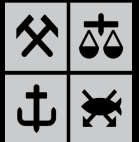
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NORMALITY OF THE RESIDUALS



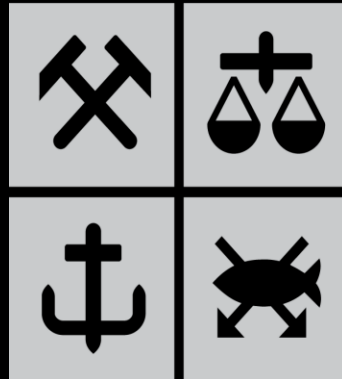
NHH
TECH3



ASSUMPTIONS

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- Constant variance (homoscedasticity) 
- No perfect multicollinearity 
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NHH TECH3



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