CS&SS 569 Visualizing Data and Models
Lab 5: Intro to `tile`

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Introduction

- Overview of `tile`

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- Preview of three examples

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  - ▶ Ropeladder: Crime example
- ▶ Installing `tile` and `simcf`

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  - ▶ Ropeladder: Crime example
- ▶ Installing `tile` and `simcf`
- ▶ Walking through examples

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     - Could be a set of points, or text labels, or lines, or a polygon
     - Could be a set of points and symbols, colors, labels, fit line, CIs, and/or extrapolation limits
     - Could be the data for a dotchart, with labels for each line
     - Could be the marginal data for a rug
     - All annotation must happen in this step
     - Basic traces: `linesTile()`, `pointsile()`, `polygonTile()`, `polylinesTile()`, and `textTile()`
     - Complex traces: `lineplot()`, `scatter()`, `ropeladder()`, and `rugTile()`

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  - ▶ `scatter()`: Plot scatterplots with text and symbol markers, fit lines, and confidence intervals

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  3. **Examine output and revise**: Look at the graph made in step 2, and tweak the input parameters for steps 1 and 2 to make a better graph

Three examples

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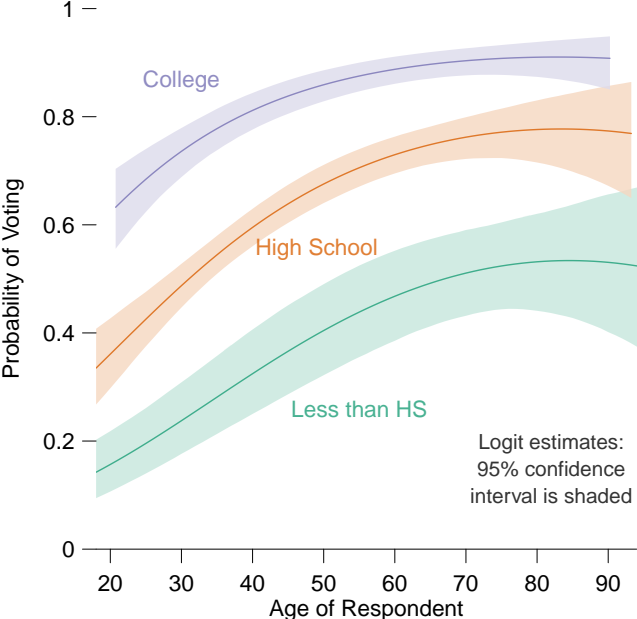- Expected probabilities and first differences: Voting example

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Party Systems and Redistribution

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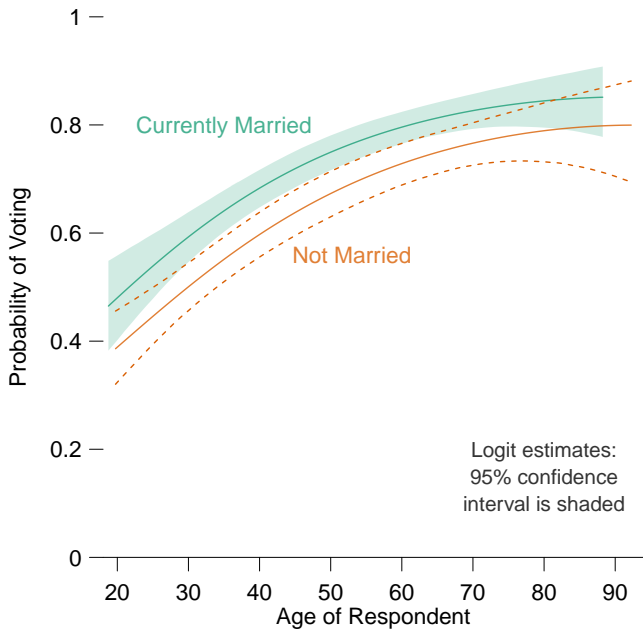   ▶ `simcf::cfMake, cfChange`...

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4. Simulate quantities of interest by compounding those 10,000 $\tilde{\beta}_k$ with counterfactual scenarios
   ▶ Then compute average (point estimate) and appropriate percentiles (confidence intervals)
   ▶ `simcf::logitsimev()` for expected values for logit models
   ▶ `logitsimfd` for first differences
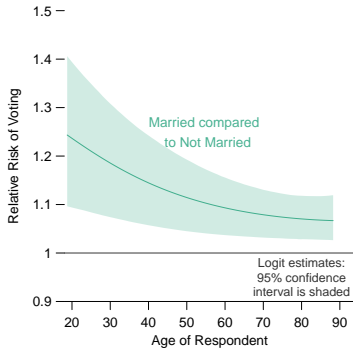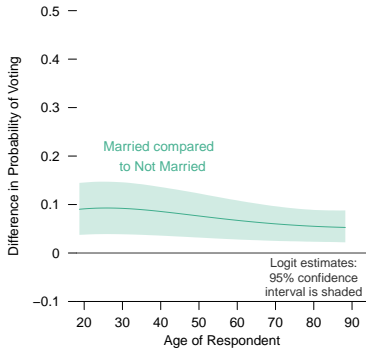   ▶ `logitsimrr` for relative risks

Expected probabilities and first differences: Voting example
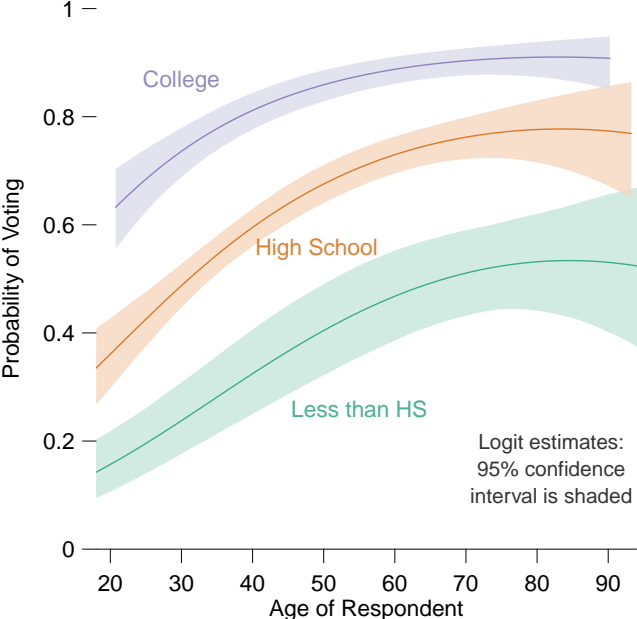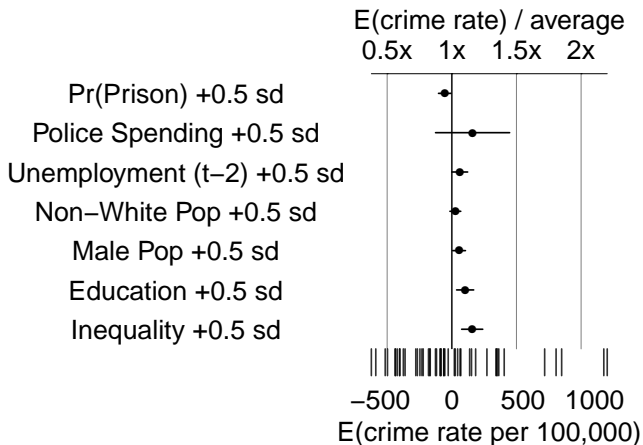
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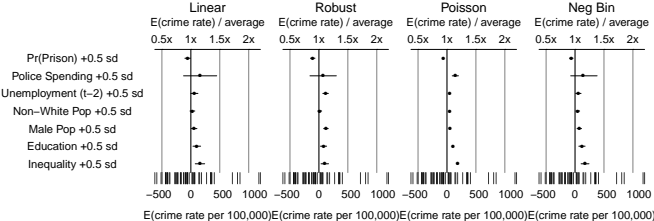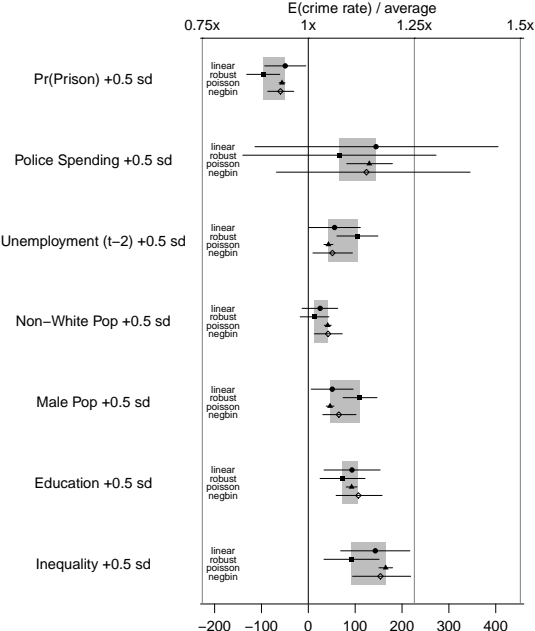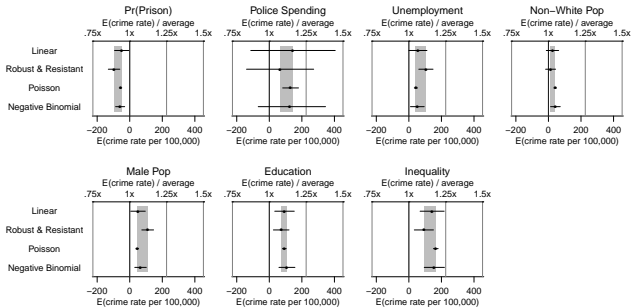# Ropeladder: Crime example (if time permits)

E(crime rate) / average
0.5x   1x   1.5x   2x

Pr(Prison) +0.5 sd
Police Spending +0.5 sd
Unemployment (t−2) +0.5 sd
Non−White Pop +0.5 sd
Male Pop +0.5 sd
Education +0.5 sd
Inequality +0.5 sd

−500   0   500 1000
E(crime rate per 100,000)

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Installing `tile` and `simcf`

- ▶ Go to Chris's website, Software section
- ▶ Also download all R scripts and data under today's Lab section