# Ben Southgate

### Contact

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Blog := bsou.io

### Education

#### Carleton College

2009-2013

- B.A., majored in economics (magna cum laude)
- Received departmental award and distinction for senior thesis in economics
- Coursework: Data Mining, Data Structures, Econometrics, Linear Algebra, Multi-variable Calculus

#### George Washington University

2015-present

- M.S., Statistics
- Coursework: Probability, Real Analysis, Analysis of Algorithms, Non-Parametrics, Stochastic Processes

# Professional Experience

#### Software Engineer, L2

2017-Present

CrossLead - Washington, D.C.

- Designed / implemented public API (oauth2, OpenAPI spec, interactive documentation)
- Built TypeScript interface generator for custom mongodb schema library
- Drove migration of large JavaScript application (150 kloc) from vanilla ES5 to TypeScript

#### Software Engineer, L1

2015-2017

CrossLead - Washington, D.C.

- Implemented graph algorithms for network analysis
- Developed AngularJS components for SPA
- Helped set up AWS autoscaling / job queue
- Worked with fully remote, international team

#### Research Assistant

2013-2015

The Urban Institute - Washington, DC

- Used Stata and SAS for survival analysis, group decomposition, (non) linear regression, and graphics generation
- Used Python for microsimulation, data cleaning and structure manipulation, and task automation, JavaScript for interactive data visualization development

#### Research Assistant

2012

University of Texas, Pop. Research Center - Austin, TX

- Conducted primary research utilizing U.T. Austin freshman applicant data, resulting in a working paper
- Used Stata for various regression and descriptive analyses, as well as graphics generation

# Academic Experience

### Teaching Assistant

2012-2013

Carleton College - Northfield, MN

- Junior / Senior level Macroeconomic Theory Course (ECON 331), which included Growth Modeling, Dynamic Optimization, Interest Rate Targeting, and RBC Analysis
- Ran review sessions, developed graphical and mathematical review material in LATEX, and conducted individual tutoring sessions

## Programming Experience

**TypeScript** — 2 year (React, NodeJS, Analysis)

**JavaScript** — 3 years (NodeJS / D3 / AngularJS)

**Python** — 4 years (web scraping / Pandas / DTW)

LATEX — 4 years (Sweave / Tikz / Resumes)

**Unix Shell** — 3 years (make / AWK / sed)

**R** — 2 years (linear/tree/non-parametric)

**Java** — 2 years (academic work)