

# BRIAN RHINDRESS

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Technical Project Portfolio: <https://bjrhindress.github.io/> (Pw: [let's collaborate!](#))

## PERSONAL STATEMENT

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Ambitious data scientist, computer engineer, and economics & finance researcher with proven success managing high-impact research and systems change projects in all sectors (public, private, non-profit). Skilled areas include Machine Learning, Econometrics, Optimization, Economics Analysis, and Public Finance.

## EDUCATION

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<b>Carnegie Mellon University</b>	Pittsburgh, PA
<b>H. John Heinz III College, School of Public Policy and Management</b>	May 2020
Master of Science in Public Policy and Management- Data Analytics	
Cum. GPA: 3.86/4.0	
<b>University of Pittsburgh</b>	Pittsburgh, PA
<b>Swanson School of Engineering</b>	May 2016
Bachelor of Science in Computer Engineering	
Cum. GPA: 3.96/4.0	

## TECHNICAL SKILLS AND COURSES

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<b>Technical Skills</b>	Programming (Python, R, Java, C, MATLAB), Analytics/Econometrics (Stata, R, Python, Excel, SAS)
	SQL (Oracle, PostgreSQL), Geospatial Analysis (ArcGIS, Python), Visualization (Tableau, PowerBI)
	Machine Learning (Sci-Kit Learn, Spark), Optimization (Python, Excel), Version Control (GitHub)
<b>Selected Courses</b>	Machine Learning, Machine Learning for Public Policy Lab, Big Data, Data Mining, Data Structures
	Database Management, Software Engineering, Computer Architecture, Advanced CPU Design
	Algorithm Implementation, Multivariate Calculus, Differential Equations, Operations Research
	PhD Microeconomics, Applied Economics, Macroeconomics, Probability and Statistics, Econometrics
	Public Finance, Financial Analysis of Companies, Energy Finance, Economic Development

## PROFESSIONAL & LEADERSHIP EXPERIENCE

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<b>Research Assistant</b>	April 2019 - May 2020
<i>CMU's Block Center for Technology and Society, Advisor: Rick Stafford</i>	
<ul style="list-style-type: none"><li>Managed a university-wide partnership between CMU and Allegheny County Department of Human Services</li><li>Facilitated research, project opportunities, and events between CMU researchers and DHS practitioners</li><li>Researched and developed cases on PA's public financing legislation for course <i>Engineering Public Policy Change</i>.</li></ul>	
<b>Lauble Fellow in Economic Development</b>	May 2019 - August 2019
<i>Heinz Center for Economic Development &amp; Allegheny County Economic Development</i>	
<ul style="list-style-type: none"><li>Designed programming for the Braddock Business Community Initiative, a regenerative economic development effort in one of Allegheny County's distressed communities</li><li>Reviewed and supported the awarding of over \$2M in grants for targeted homelessness programs</li><li>Prepared and presented policy briefs on equitable economic development to department leadership</li></ul>	
<b>Site Manager, Sto-Rox School District</b>	June 2017 - April 2019
<i>Communities in Schools of Pittsburgh and Allegheny County (CISPAC)</i>	
<ul style="list-style-type: none"><li>Negotiated an inaugural partnership between CISPAC and the Sto-Rox School District</li><li>Crafted and implemented a comprehensive district-wide "Community School" strategy by managing a local network of 25+ partner organizations and facilitating executive-level collective impact planning</li><li>Initiated district grant-writing and staff trainings yielding \$500,000 from local, state and national sources (10 successful grants, 3 additional fundraisers)</li></ul>	

**External Engagement Manager**

September 2018-May 2020

*Heinz College's Council for Diversity, Richness, and Inclusion*

- Developed campus-wide relationships with students and administration to advance Diversity and Inclusion
- Co-curated a bi-weekly newsletter of campus and community initiatives to promote student and faculty engagement
- Supported the growth of a campus-wide student advocate network (100+ active students)

**Coro Fellow in Public Affairs**

August 2016 - May 2017

*Coro Pittsburgh Center for Civic Leadership*

- Selected for premiere experiential leadership training program to prepare diverse, talented, and committed individuals for effective and ethical leadership in the public affairs arena
- Completed inter-sector placements with e360 Technologies (startup), The McKees Rocks Community Development Corporation (non-profit), the Sto-Rox School District (government), and engaged regional leaders in key domains (immigration, criminal justice reform, housing, economic development)

**Social Robotics Intern**

May 2015 - August 2015

*National University of Singapore*

- Performed summer research under the guidance of Shuzhi Sam Ge.
- Developed the infrastructure for a conversational social robot using Android OS, and CMUSphinx Open-Source Speech Recognition Toolkit

**President**

Summer 2014 - August 2015

*Design Hub, Swanson School of Engineering*

- Design Hub is an interdisciplinary, student-powered organization that gives student designers practical experience in making medical devices with real physician and graduate mentors (75 active members, 15+ design teams).
- Helped re-brand club and grew from 4 to 15+ student led design teams, expanded interdisciplinary membership
- Maintained relationships with Coulter, Center for Medical Innovation grant programs, and university administration

**User Experience Fellow**

June 2014-August 2014

*General Motors Advanced Technical Center in Israel*

- Managed summer long project testing effectiveness and viability of a new driver's seat technology
- Designed and conducted full research study on 25 test subjects using a driving simulator, MATLAB, and Arduino
- Presented final findings for U.S. GM management
- Paper "Haptic seat for automated driving: preparing the driver to take control effectively" published by Association for Computing Machinery, 2015

**University Innovation Fellow**

September 2013 - May 2016

*University of Pittsburgh & National Collegiate Inventors and Innovators Alliance*

- Received six-week online training and initiation at Stanford's d.School, designed to empower fellows to deliver product development and innovation resources to home University
- Mapped University of Pittsburgh campus innovation landscape for presentation to school leadership
- Generated and hosted engineering workshop series on design-thinking, makerspaces, PCB-building, and more
- Co-created and served as inaugural Teaching Assistant for a project-based engineering course, "The Art of Making"

## SELECTED PROJECTS

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### **Expanding Transit Access in the Mon Valley**

March 2019 - May 2020

*Heinz College and Pittsburghers for Public Transit*

- Co-authored a transportation and economic development-focused memo through community-based research course
- Inaugural “Beyond the Busway Fellow” collecting transit need data with participatory research team
- Scoped, proposed, and manage Origin-Destination model systems capstone project

### **Evaluation of Racial Bias in the COMPAS Recidivism Assessment Tool**

March - May 2019

*Data Mining Course*

- Re-designed, implemented, and validated machine learning-based models for predicting recidivism, based on Broward County’s COMPAS algorithm
- Evaluated predictive tool for implicit bias across several dimensions (race, gender, geography)

### **Mechanical-Electrical Cortical Spreading Depression Simulator**

January 2016 - April 2016

*Senior Design Project Consultancy for Cerebroscope, Inc.*

- Created a mechanical-electrical device that simulates the scalp surface voltage of a brain surface cortical spreading depression (CSD) for use in bench-testing.
- Research of the causes, prevalence, and characteristic features of CSDs, requirement specifications, prototype design, verification & validation, fabrication, testing and quality assurance.
- Project won first place in “Product Realization” course category at the Senior Design Expo 2016.

## BOARDS, AWARDS & SOCIETIES

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CMU Graduate Student Association Student Leadership Award	2020
CMU University Leadership Student Advisory Committee (ULSAC) Representative	2019
Pittsburghers for Public Transit Beyond the Busway Fellow	2019
Stephen Lauble Economic Development Fellow	2019
Heinz College Strategic Diversity and Inclusion Strategic Planning Committee Representative	2019
Heinz College Council for Diversity, Richness, and Inclusion Board - Community Engagement Chair	2018
Coro Fellowship in Public Affairs	2017
UPitt University Scholar (top 2% overall university class)	2016
G. Alec Stewart Honors College Student Achievement Award	2015
QIT Health Innovators Fellow	2015
University Innovation Fellow	2014
II-VI Foundation Industrial Scholarship	2014
Israel Excel Fellowship	2014
Tau Beta Pi Engineering Honor Society	2013
University of Pittsburgh Honors College Scholarship	2012