# Michael S. Browne, PhD

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## SUMMARY

Economist with over 15 years of progressive experience working closely with public and private sector stakeholders, developing and applying macroeconometric, forecasting, and policy simulation models to macroeconomic, fiscal, tax and investment policy analysis and program design. Over 8 years of experience architecting and developing software, systems and networks for autonomous generation, storage, analysis, and visualization of economic and financial data.

## EDUCATION

**THE GEORGE WASHINGTON UNIVERSITY Department of Economics,** PhD in Economics **Department of Economics,** MPhil in Economics

### **UNIVERSITY OF MARYLAND Department of Economics**, B.A in Economics

## PROFESSIONAL EXPERIENCE

### **KENTRO**

### Lead Economist/Data Scientist (Reference Jeanine Russell: jeanine.russell@kentro.us)

- Lead team of data scientists and economists in the development of artificial intelligence algorithms
- Provide thought leadership among subject matter experts and government officials
- Coordinate and execute applied artificial intelligence and machine learning research projects
- Coordinate and prepare research reports and technical documents to aid policymakers and analysts
- Design and implement data engineering pipelines for data acquisition and modeling
- Design, develop and document processes for the automated reporting of research results
- Present and participate in research review meetings and liaise with government officials

### SAGE RESEARCH & DEVELOPMENT, Research Division

#### Principal Research Scientist, Data Generation Processes

- Supervised and executed applied research projects relevant to socioeconomic data generation
- Architected and developed Internet of Things (IoT) software, systems and networks
- Developed application programming interfaces to facilitate machine to machine communication
- Architected and developed ETL (extract, transform and load) data engineering pipelines
- Architected and developed real-time artificial intelligence and machine learning pipelines
- Contributed to the design of internal AI Governance and Data Governance frameworks
- Reviewed and revised Data Governance Processes for compliance with policies and regulations
- Coordinated privacy assessments of cloud resources and data management services
- Designed and implemented data management, quality, privacy, and anonymization processes
- Developed autonomous processes for real-time data visualization and generative reports

### **TOBAGO HOUSE OF ASSEMBLY, Division of Finance and Enterprise**

Deputy Chief Economist (Reference Selvon Hazel)

- Assisted in the management of the unit and provided guidance to its staff
- Coordinated, monitored and prepared technical reports and papers on policy developments
- Coordinated the reviewed and design of economic, fiscal and industrial policy programs
- Executed and supervised major research projects relevant to the economy of Tobago
- Prepared terms of reference and facilitated employment of staff and consultants
- Presented papers and research findings in academic and technical conferences and seminars
- Reviewed and revised data governance strategies and data management processes

### Washington, DC

Scarborough, Tobago

2021-2022

2022-2024

2014 College Park, MD

Washington, DC

2024- Present

Washington, DC

2008

2018

# INTERNATIONAL FINANCE CORPORATION, CSEIN/CSEIM

Macroeconomist Consultant (Reference Evgenia Shumilkina: <u>eshumilkina@ifc.org</u>)

- Designed, developed and documented infrastructure investment economic impact models
- Predicted the economic and environmental impacts of infrastructure investment projects
- Developed ETL data engineering and data science pipelines
- Analyzed data using statistical and machine learning methodologies
- Participated in development of the Anticipated Impact Measurement and Monitoring framework
- Designed indicators for the Transport Infrastructure, Mining, and Oil and Gas AIMM frameworks

### **INTER-AMERICAN DEVELOPMENT BANK, IFD/FMM**

#### Fiscal Economist Consultant (Reference Gerardo Reyes-Tagle: <u>gerardor@iadb.org</u>)

- Reviewed and evaluated priorities for comprehensive tax policy reforms for Caribbean nations
- Drafted and revised qualitative and quantitative reports on tax policy and administration issues
- Implemented ETL data pipelines for tax policy, tax expenditure and state enterprise data
- Participated in preparation of Fiscal Strengthening to Support Economic Growth Programs
- Participated in technical assistance and advisory missions and liaised with government officials

| <ul> <li>THE GEORGE WASHINGTON UNIVERSITY, Research Program on Forecasting<br/>Academic Research Assistant (Reference Tara Sinclair)</li> <li>Provided research and administrative assistance for program directors and members</li> <li>Maintained program website, RePEc page and social media accounts</li> <li>Organized forecasting seminars/webinars, and 14th and 17th OxMetrics User Conferences</li> </ul>   | <b>Washington, DC</b><br>2013- 2018 |
|---|-------------------------------------|
| <ul> <li>BARBADOS, Ministry of Finance and Economic Affairs</li> <li>Macroeconomic Analyst Consultant (Reference Derek Gibbs: <u>gibbsd@caribank.org</u>)</li> <li>Modeled and programmed macroeconometric model of the Barbados economy</li> <li>Implemented ETL data pipelines used in the macroeconometric model</li> <li>Forecasted macroeconomic policy scenarios to aid in policy analysis and formulation</li> <li>Provided technical training to ministry personnel in use of the macroeconometric model</li> </ul> | St. Michael, Barbados<br>2013       |
| <ul> <li>BENCHMARK FORECASTS</li> <li>Macroeconomic Research Analyst (Reference Fred Joutz)</li> <li>Implement ETL data pipelines from multiple energy and macroeconomic data sources</li> <li>Develop and test energy and macroeconometric models for forecasting and policy analysis</li> <li>Draft, revise and review technical and policy reports</li> <li>Referee papers for academic journals including Energy Economics and Energy Policy</li> </ul>   | <b>Washington, DC</b><br>2012- 2022 |
| <ul> <li>MANUFACTURERS ALLIANCE FOR PRODUCTIVITY AND INNOVATION</li> <li><i>Econometric Analyst Intern (Reference Dan Meckstroth)</i></li> <li>Modeled and programmed Input-Output model of the US economy</li> <li>Forecasted US macroeconomic data using the developed Input-Output model</li> <li>Specified and estimated structural econometric models of the US economy</li> </ul>   | Arlington, VA<br>2012               |

#### **INSTITUTE FOR POLICY STUDIES**

#### Macroeconomic Analyst Intern (Reference Dedrick Muhammad)

- Drafted and co-authored articles, reports, grant proposals and opinion-editorials
- Coordinated efforts with other organizations for collaborative projects and events
- Organized events within the organization and for the public

#### **TRINIDAD AND TOBAGO, Judiciary Research and Statistics Unit** *Statistical Analyst Intern (Reference Desmond Hunte)*

- Implemented ETL data pipeline to make data readily accessible
- Analyzed judicial statistical data and drafted analytical reports
- Designed, conducted and evaluated surveys carried out within the judicial system

Washington, DC

Washington, DC

Washington, DC

Port of Spain, Trinidad

2009

2007

2014-2016

2018- Present

### SKILLS

Cloud/Data: Airflow, Azure, Cassandra, Docker, Etcd, Kafka, K8s, Pandas, PyTorch, Spark, SQL, TensorFlow Languages: Native in English; Intermediate in Spanish and French Programming: Bash/Dash, Go, JavaScript, Linux, Python, R, Rust, Solidity Software: EViews, Matlab, Microsoft Office, OxMetrics, SAS, Stata, Tableau

## TEACHING EXPERIENCE

| THE GEORGE WASHINGTON UNIVERSITY  | Washington, DC |
|---|----------------|
| Adjunct Professor (Coordinator Michael Bradley)                               | 2017- Present  |
| <ul> <li>Lecturer in Macroeconomic Theory, Department of Economics</li> </ul> |                |

Lecturer in Macroeconomic Theory, Elliot School of International Affairs

# CONFERENCE ACTIVITIES

| 25th Federal Forecasters Conference, Participant  | 2024 |
|---|------|
| 21st Dynamic Econometrics Conference, Presenter   | 2019 |
| Caribbean Centre for Money and Finance 50th Annual Monetary Studies Conference, Presenter | 2018 |
| Workshop on Forecasting Issues in Developing Economies, Participant                       | 2017 |
| Caribbean Centre for Money and Finance 48th Annual Monetary Studies Conference, Presenter | 2016 |
| Central Bank of Barbados 36th Annual Review Seminar, Presenter                            | 2016 |
| 17th OxMetrics User Conference, Presenter   | 2016 |
| 21st Federal Forecasters Conference, Participant  | 2015 |
| 14th OxMetrics User Conference, Participant   | 2014 |
| 11th OxMetrics User Conference, Participant   | 2012 |
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## AWARDS/GRANTS

| The George Washington University, Conference Travel Grant for Graduate Students   | 2016 |
|---|------|
| The George Washington University, Department of Economics Conference Travel Grant | 2016 |
| The George Washington University, Department of Economics Conference Travel Grant | 2016 |
| 17th OxMetrics User Conference, Best PhD paper and presentation                   | 2016 |

## SERVICE AND MEMBERSHIP

| GWU Research Program on Forecasting, Member and archivist  | 2013- Present |
|--|---------------|
| GWU Research Program on Forecasting, Research assistant    | 2013-2018     |
| 17th OxMetrics User Conference, Local organizing committee | 2016          |
| 14th OxMetrics User Conference, Local organizing committee | 2014          |
| GWU Student Association for Graduate Economics, Member     | 2012-2018     |
| GWU Macroeconomics Reading Group, Member                   | 2013-2018     |
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## WORKING PAPERS

### "Liquidity effects on consumers' imports in Trinidad and Tobago"

- The George Washington University Research Program on Forecasting Working Paper 2016-005
- Central Bank of Barbados Working Paper 2017-02
- "Estimating monetary policy rules in small open economies"
- The George Washington University Research Program on Forecasting Working Paper 2019-001
- Paper presented at the Caribbean Centre for Money and Finance 48th Annual Monetary Studies Conference
- "The Dutch Disease and Monetary Policy", joint with Fred Joutz
- Paper presented at the 21st Dynamic Econometrics Conference
- Paper presented at the University of Vigo Department of Economics Macroeconomics Seminar
- Paper presented at the Caribbean Centre for Money and Finance 50th Annual Monetary Studies Conference

## ACADEMIC REFERENCES

**Research Professor Neil R. Ericsson (Dissertation Co-Director**, <u>ericsson@frb.gov</u>) Division of International Finance, Board of Governors of the Federal Reserve System

**Professor Frederick L. Joutz (Dissertation Co-Director**, <u>*bmark@gwu.edu*</u>) Department of Economics, The George Washington University

**Professor Tara M. Sinclair (Dissertation Committee Member**, <u>tsinc@gwu.edu</u>) Department of Economics, The George Washington University

**Professor Michael D. Bradley (Dissertation Committee Member**, <u>mdbrad@gwu.edu</u>) Department of Economics, The George Washington University