

# Patrick Bray

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## WORK EXPERIENCE

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### Booz Allen Hamilton – Data Science & Modeling Solutions

Staff Data Scientist | Dec 2021 – Present

I supported the development of Python packages to optimize job shop schedules and predict aircraft maintenance events.

- Added a modified Shifting Bottleneck Heuristic to the optimization suite
- Reduced constraint runtime 90% by selectively applying parallel computing
- Implemented a LSTM Autoencoder in PyTorch for time-series anomaly detection
- Developed an engaging and collaborative training programs for new hires to the team

### Deloitte Consulting – Analytics & Cognitive

Data Scientist | Apr 2021 – Dec 2021

I served in multiple high-profile, high-intensity projects where data management, analytics, and reporting were mission-critical.

- Presented visualizations and real-time reporting to client stakeholders daily
- Enabled historical reporting capabilities within client database by introducing a novel querying method to unlock feature granularity for time series analysis
- Programmed linear optimization model for resource allocation, enhancing a highly manual and expensive process

### Accenture – Scientific Informatics

Data Engineer | Jan 2020 – Apr 2021

I developed a complex, interactive ETL tool from inception to deployment.

- Automated creation of large amounts of laboratory data across multiple sites, reducing build time by 97%
- Led team of 3 data engineers through an Agile development process, employing good development practices

### Vanderbilt University – Johnson Laboratory

Undergraduate Biological Researcher | Jan 2017 – Jan 2019

### McMillan Analysis Corporation

Options Trading Intern | Summer 2018

## EDUCATION

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### Georgia Institute of Technology

Master of Science, Analytics | Jan 2021 - May 2023

Machine Learning Focus

### Vanderbilt University

Bachelor of Engineering, Biomedical Engineering | Aug 2015 - May 2019

Scientific Computing Minor

## QUALIFICATIONS

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- **Data Analysis/Programming:** Python (Pandas, Numba, Networkx, Scikit-learn, SciPy, Django, PySim) SQL, R, MATLAB, Java, Git
- **Data Visualization:** PowerBI, Tableau, Jupyter Notebook
- **Security Clearance:** Top Secret (May 2022 – Present)