Bavanan Bramillan

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Technical Skills:

- **Languages & Tools:** Python, JavaScript, TypeScript, Swift, PostgreSQL, C/C++, React, Next.js, Node.js, PyQt5, Pandas, Plotly, OpenPyXL, Tableau, REST APIs, Git, GitLab CI/CD
- *Practices*: Agile, CI/CD, TDD, Data Processing, Visualization, Cross-functional Collaboration

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Projects & Experience:

Software Engineer Intern

SRI International (Center for Advanced Imaging) – Princeton, NJ (April 2025 – Present)

- Independently developed a **PyQt5 GUI tool** that automates **LiDAR SCA report generation**, reducing manual effort from weeks to hours
- Engineered a **data pipeline** using **Python, NumPy, pandas, OpenPyXL, PyWin32** to process binary sensor data and generate structured **PPT reports**
- Automated slide layouts with dynamic **SVG-to-PNG** image generation and metadata-based content placement via **JSON templates**
- Packaged the tool as a standalone **.exe** using **PyInstaller and GitLab CI/CD**, with live console for background process feedback
- Collaborated with researchers for domain insight and reverse-engineered calculations (e.g., **Holdoff, AOI, Afterpulsing**) by exploring internal tools and Git repos
- Currently building a **PostgreSQL–React–Express** web database to sync with **Omnify BOM,** tracking hardware **assembly/testing stages** and **generating metrics**

Beats by Dre Data Analyst Extern

Extern (Paragon One) – Remote (June 2024 – August 2024)

- Conducted research with the **Consumer Insights team**, performing **sentiment analysis** on over 1,000 Amazon headphone reviews
- Delivered a **12-part data viz report** leveraging Pandas, NumPy, Plotly, which informed marketing strategies and feature improvements

NBA Player Performance Prediction App (*Live Demo: https://nba-study-103.streamlit.app/)*

- Built an interactive application forecasting NBA player performance using a **Random Forest model** with Scikit-learn
- Leveraged GitHub **nba_api** for real-time statistics and created engaging visualizations like **shot charts and spider charts**
- Collaborated with a team of 3 to design a user-centric interface that increased engagement and highlighted key player insights

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Education: Drexel University – Philadelphia, PA

B.S. in Software Engineering (Expected June 2027)

- **Coursework:** Data Structures, Algorithms, Software Requirements, Linear Algebra, Calc III, Database Management, Systems Programming
- Participating in Drexel's mandatory co-op program for hands-on, full-time industry experience prior to graduation