JANIA VANDEVOORDE

Citizen of the United States, France, and the Dominican Republic
(401) 451-0812 | jania@vdvoorde.com | LinkedIn | GitHub | Website

EDUCATION

Brown University • Providence, RI — Graduation: May 2025
Bachelor of Science - Computer Science | *Bachelor of Science - Statistics* — Major GPA: 4.0

- **Relevant Courses:** Data Science, Machine Learning, Computer Vision, Data Structures and Algorithms, Computer Systems, Software Engineering, Theory of Computation, Linear Algebra, Multivariable Calculus
- **NCAA Division I Women's Rugby Athlete:** Team captain and starter
  - 2023 & 2024 (Back-to-Back) Collegiate Rugby Championship 7's National Champion
  - **Recognition:** 2022-23 & 2023-24 Scholastic All-American, 2023-24 Strength & Conditioning Athlete of the Year

SKILLS & TECHNICAL TOOLS

- Fluency in English and French; limited working proficiency in Arabic
- Global-minded: traveled to 40+ countries, lived in 7 countries
- **Programming Languages:** Python, C#, R, Java, C/C++, TypeScript, JavaScript, Alloy
- **Technologies:** SQL, Git, LaTeX, TensorFlow/PyTorch/Keras, NumPy, pandas, matplotlib, scikit-learn, React, Jira

LEADERSHIP & WORK EXPERIENCE

***Head Teaching Assistant* @ Brown University Department of Computer Science** • Providence, RI — 11/22 - Present

- Hire and manage diverse teams of Teaching Assistants (totaling over 120 people) across four semesters under the mentorship of course instructors, demonstrating exceptional leadership and team-building skills in a dynamic academic setting
- Lead the development and refinement of course materials, curating the learning experience for more than 1,100 undergraduate students in foundational computer science concepts (discrete mathematics and data structures)

***Software Engineer Intern* @ MongoDB (.NET/C# Driver)** • New York, NY — 06/24 - 08/24

- Designed and implemented an end-to-end solution for migrating query execution from the client to the server, improving performance by circumventing client memory bottleneck
- Enhanced the driver's Microsoft OData adapter library by applying meta programming techniques to support advanced query functions, including time and substring operations
- Identified and resolved multiple translation bugs, leading to proper serialization of several data types and comprehensive handling of nullable numeric conversions

***Data Science Intern* @ Takachar** • Remote — 01/24

- Played a pivotal role in transforming a project that directly contributed to reducing carbon emissions by developing an algorithm to detect spikes in biomass weight within agricultural waste reactors
- Processed and analyzed 75 unique datasets to accurately track and plot weight fluctuations and the detected spikes, contributing to advancements in reactor optimization
- Collaborated closely with Takachar's Data Science Lead to refine detection methods, demonstrating a strong ability to translate complex data into actionable insights

TECHNICAL PROJECTS

Colorizer - image colorization with convolutional neural networks — 04/24 - 05/24

- Developed and trained a CNN to restore color in grayscale images, integrating techniques from multiple research papers
- Implemented the chosen VGG-19 U-Net architecture with perceptual loss using TensorFlow
- Created an open-source web application and API, enabling users to upload grayscale images and receive colorized outputs from the trained model

Data Spirits - an analysis of the correlation between alcohol consumption and sports betting volume — 02/24 - 05/24

- Implemented data interpolation and predictive modeling techniques by developing a robust machine learning pipeline that tested multiple algorithms including Lasso, Ridge, XGBoost, and ElasticNet, with hyperparameter tuning to identify the best model for each US state
- Designed and launched an interactive website featuring dynamic visualizations to present findings and engage users

Scrappy - a photo-sharing/scrapbook-creating social media web application — 11/22 - 12/22

- Developed the frontend components using React and TypeScript, and built the backend with MongoDB and Java, integrating photo uploads to AWS
- Registered users using Google Authentication API to create a secure login service
- Implemented a natural language sorting algorithm using English feature vectors to sort posts, optimizing user experience

WeensyOS Model - operating system model in Forge, a formal methods tool — 04/23 - 05/23

- Designed the comprehensive model in temporal Forge to verify properties about virtual memory and page allocation within an operating system, such as process isolation