

# CRYSTAL “DANIKKA” JELSKI

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## Education

### Rutgers University- New Brunswick

Expected May 2026

*Bachelor of Science in Computer Science*

*New Brunswick, NJ*

- 3.91 GPA — Dean's List
- Events: HackHers 2023, CreateRU 2023 — Clubs: WiCS (Women in Computer Science), IEEE Electronics Division

## Technical Skills

**Languages:** Java, C, Python, R, HTML, CSS, SQL

**Developer Tools:** VS Code, RStudio, Git/GitHub

**Technologies:** SQLite3, pandas, Matplotlib, Seaborn, BeautifulSoup

## Relevant Coursework

- Computer Architecture (C)
- Discrete Structures I & II
- Calculus I & II
- Data Structures (Java)
- Data 101: Data Literacy (R)
- Intro Linear Algebra

## External Coursework

- CodePath's Intro to Cybersecurity Course (cert)

## Experience

### Rutgers Computer Science Department

June 2024 – May 2025

*Undergraduate Aresty Research Assistant*

*Piscataway, NJ*

- Assisting on a project which explores techniques to parallelize packet processing code across multiple CPU cores, and building compilers to translate code written for single CPU cores to run efficiently on multiple CPU cores.
- Will work with a high-speed packet processing framework (**eBPF**) and a compiler front-end (**Clang**).

### Rutgers Computer Science Department

January 2024 – May 2024

*Discrete Structures I Grader*

*Piscataway, NJ*

- Collaborated with course professor and TAs (teaching assistants) to grade assignments and exams, address student inquiries, proctor exams, proofread quiz questions, and process regrade requests.
- Graded on topics including mathematical logic, proofs, functions, logic gates, modeling computation, and number theory, demonstrating a strong foundation in computer science principles.

### Bandila Studios, LLC

May 2022 – June 2022

*Project Intern*

*Remote*

- Collaborated with team members to design a data structure for a brand audit quiz, assessing clients' social media presence and marketing needs.
- Developed a point-based system quiz using **Python**, and **HTML** and **CSS** for front-end styling, including interactive elements such as drop-down lists.

## Projects

### Top "MyDramaList" Dramas Analysis | *Python, SQL*

July 2024

- Utilized **Python** and various libraries to gather and analyze Asian show data. Used web scraping techniques with **BeautifulSoup** to extract data from website "MyDramaList" for show titles, language, ratings, tags, etc.
- Employed **SQLite3** to store the extracted data of 5,000 shows into a database. Implemented queries in **SQL**.
- Used **pandas** for data manipulation and analysis. Created visualizations with **Matplotlib** and **Seaborn**.

### Simulating a Cache and Optimizing Programs for Caches | *C*

April 2024

- Experimented with different cache designs, and see how they impact the ability for caches to create an illusion of fast access from the CPU to main memory.
- Simulated fully associative, direct-mapped, and 4-way set-associative caches.
- Optimized matrix multiplication using cache blocking and implemented a cache-oblivious algorithm for matrix transposition.

### Predicting Future Salaries | *R*

Dec 2023

- Built a prediction model to predict one's future salary based on factors such as college tuition, age, GPA, and geographical location.
- Performed data transformations, like polynomial adjustments for non-linear relationships, and conducted performance evaluations across subsets. Utilized linear regression models, and recursive partitioning and regression trees (rpart).
- Achieved a Mean Squared Error (MSE) of 149.86748 against the testing data set, demonstrating the model's accuracy and reliability.