SABASTIAN HIGHTON
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SKILLS

SQL, Excel, Python (Pandas, Numpy, Sci-kit Learn, Tensorflow, Matplotlib, JupyterLab), AWS Cloud (DynamoDB, S3, IAM, CDK, Lambda), JavaScript (Next, React), Windows, MacOS, Linux, Java

PROJECTS

Data Analysis on RNA Pairing Outcomes

- Cleaned and transformed data using Java, created an image of RNA bonding types, outputted data to an image file, then performed data analysis and ML in Python.
- Engineered a sophisticated convolutional neural network algorithm to assess RNA pairing probabilities from image files, increasing efficiency in analyzing genetic data, accelerating breakthroughs in biotech innovation tenfold.
- Collaborated with a professor to conduct research in a team of three co-authors increasing novel insights.
- IEEE SoutheastCon 2024 accepted the white paper and will publish the research to the number one leading collection of consolidated published papers in computer science.
- Find research as: Beyond Sequence: A Novel Image-Based Model for MicroRNA Target Prediction.

Personal and Portfolio Website - www.thehighton.com

- Host impactful projects integrating AWS Cloud (Lambda) developed in Python and a front-end crafted with Next.js and CSS increasing working efficiency tenfold.
- Implement AWS IAM to securely manage development accounts with Docker, CDK, S3, and CloudFormation handling CI/CD of a Lambda function.

Live Automated Trading Agent

- Fully autonomous trading algorithmic solution created with Python that connects to a live feed of BTC/USD via an API call able to run 24 hours a day and make 1440 orders in that time.
- Data cleaned using Numpy and Pandas libraries and visualized using Matplotlib, increasing clarity of meaning.
- Buy, sell, or take no action based on quality financial metrics and conditionals that ensure more stability in a volatile cryptocurrency market yielding a 7.13% return over 3 months.

EDUCATION

University of North Georgia, Mike Cottrell College of Business — Dahlonega, GA
BS Computer Science — **GPA: 3.92/4.0** — **December 2023**
Summa Cum Laude

EXPERIENCE

University of North Georgia — Dahlonega, GA
National Science Foundation Funded Research Assistant — May 2023 – August 2023

- Generated novel and useful data using Linux virtual machines, Python, JupyterLab, and supercomputers.
- Implemented and compared machine learning models on clean data documenting key metrics in Excel.
- Coordinated and engaged in meetings three times a week with a co-researcher and professor to align on project milestones and contributions, streamlining research processes.
- Enhanced project outcomes and productivity through collaborative team solutions and shared expertise.
- Continued to use skills gained in projects after the position closed.