

# Andrew Hays Burns

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## EDUCATION

### The University of Georgia

August 2020 – May 2024

*B.S. Mathematics, B.S. Computer Science* | GPA: 3.93/4.0

Summa Cum Laude, Outstanding Graduate in Computer Science, Hollingsworth Award, CURO Scholar

### Goethe Institute

June 2022 – August 2022

German Language Program in Freiburg, Germany | GPA: 4.0/4.0

### L'Université Sainte-Anne

June 2018 – August 2018

French Language Program in Church Point, Nova Scotia | GPA: 4.0/4.0

## WORK EXPERIENCE

### Nike, Beaverton, Oregon

#### Machine Learning Engineer

September 2024 - present

##### Infrastructure Engineering in Consumer Search

- Automated the routing configuration of search and browse requests to various downstream search models
- Designed and deployed a HADR system for Nike's search routing engine and inference endpoints

#### Software Engineering Intern

June 2023 – August 2023

##### API Support Tool for testing various Order Payloads

- Designed a data store for customer order data - supporting scalability, maintainability, and efficiency
- Frontend development: expanded order search, json payload importer, filter responses by validation success

##### Business Metrics Dashboard for analyzing Order Exceptions

- Programming with Vue.js and Java, built a dashboard to provide current order exception data for marketplace operations team
- The dashboard highlights key order flow data with Chart.js, showing when and where order exceptions are thrown

##### Data Analytics on Order Exceptions

- Programming with python and d3.js, created data visualizations on order exception data to find patterns between exceptions

### University of Georgia, Athens, GA

#### Undergraduate Teaching Assistant

May 2021 – May 2023

- Practiced programming with fellow students. Responsibilities included grading and teaching in lab
  - Summer 2021: CSCI 1301 – Introduction to Computing and Programming
  - Fall 2021: CSCI 1302 – Software Development
  - Spring 2023: CSCI 1302 – Software Development

## PROJECTS & RESEARCH

### RadioBERT: BERT-based NLP model fine-tuned on radiation oncology corpora

July 2021 – May 2022

- Contributed to this project by pre-processing data, fine-tuning BERT-based models, and evaluating performance
- Co-author of [ClinicalRadioBERT: Knowledge-Infused Few Shot Learning for Clinical Notes Named Entity Recognition](#)

### ProbeSearchV3: gRNA / primer mapping application

August 2021 – December 2022

- Developed genome database querying app that maps input reads to backend references
- By mapping input RNA sequences with a reference genome, geneticists are able to identify and annotate expressed genes

### Predicting Spot Instance Lifetimes: server lifetime predictor as part of an AWS Spot Instance workflow

May 2022 – December 2022

- Researched implementing serverless workflows with AWS Spot Instances
- Workflows included methods for predicting server lifetime, checkpointing work, and overprovisioning backup servers
- Developed a server lifetime predictor, using machine learning models like ARIMA to help mitigate risk of out-of-bid failure

### Linear Algebra of Perspective Projections: mathematics paper

April 2023 – May 2024

- Launched into an exploration on the math of perspective projections, particularly into how 3d points are captured on a 2d plane
- Author of [Linear Algebra of Perspective Projections](#)

### Lingo: vocabulary notetaking application with GPT-powered tutor

January 2024 – present

- Developing a full-stack vocabulary notetaking app to supplement reading habits

## LEADERSHIP & ACTIVITIES

### Corsair Society

January 2022 – May 2024

#### Member (2022 – 2023), Head of Technology (2023 – 2024)

- Selected as 1 of 7 in a competitive student-led organization focused on preparing students for jobs in technology
- As Head of Technology, interviewed and selected succeeding class, and lead them through SWE preparation

### SolveUGA

August 2022 – December 2023

#### Member

- Met twice weekly to solve leetcode problems

## SKILLS & LANGUAGES

Java, C++, Python, JavaScript, Rust

Git, Docker, Vue.js, PyTorch, Flask, Spring Boot, Terraform, MATLAB, d3.js