

Julius Broomfield

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

Bachelor of Science in Computer Science, Minor in Philosophy

May 2026

Concentrations: Artificial Intelligence, Modeling-Simulation

Coursework: Algorithm Design, Artificial Intelligence, Cognitive Science, Computer Architecture, Object-Oriented Design

EXPERIENCE

Microsoft

Redmond, WA

Software Engineering & Product Management (TNT) Intern

June - August 2023

- Developed backend of a privacy management tool, employing OSINT methodologies to systematically identify and report users' online privacy risks
- Designed a custom algorithm to calculate privacy scores, effectively assessing users' vulnerabilities
- Refined a PII detection model from internal Azure Cognitive Services to identify and report sensitive information in consumers' social media content with ~90% detection accuracy of target PII entities
- Led the development of the project specification, establishing critical features and technical requirements
- Worked under the M365 Core team as an intern in the TNT innovation academy
- **Skills:** Python, Flask, Powershell, Javascript, React.js, Figma

PROJECTS

Chess Opening Recommendation Engine

Present

- Developing recommender system 📄 with collaborative filtering using singular value decomposition to recommend chess openings to Chess.com users
- Gathered and created a public dataset using Chess.com API; applied preprocessing techniques to prepare data
- **Skills:** Python, Pandas, Apache Parquet

Ideate

September 2023

- Finalist for MLH "Best Use of Google Cloud" Award - PennApps XXIV
- Developed web application 📄 to help users turn pseudocode and high-level system design directly into code
- Spearheaded backend development - integrated OCR, STT, and automatic code and repository generation
- **Skills:** Python, Flask, Javascript, React.js, Google Cloud (GCP)

Channel Growth Model

April 2023

- Conducted comprehensive analysis 📄 of popular YouTube channels with data visualization to identify trends
- Developed neural network regression model using Keras to predict subscriber count based on several key factors
- Preprocessed and cleaned dataset for enhanced model performance, achieving ~70% accuracy and a MSE of ~40
- **Skills:** Python, Pandas, Seaborn, Tensorflow, Numpy, L^AT_EX

TECHNICAL SKILLS

Machine Learning: Python, Scikit-learn, Pandas, Numpy, Tensorflow, Matplotlib, Seaborn

Software Engineering: Flask, Java, HTML, CSS/SCSS, Git, C/C++, Linux, Firebase, Docker