JOSEPH ALLRED

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EDUCATION

Master of Computer Science   **2025 -** Anticipated Graduation **Dec 2026**
University of California, Irvine
GPA: 4.00/4.00

Bachelor of Science in Computer Science   **2021 - 2025**
University of Colorado Boulder
GPA: 3.67/4.00

SKILLS

Languages: Python, C, C++, Java, SQL, HTML, CSS, JavaScript, Scala, Shell Scripting
Technologies/Platforms: GitHub, Agile, Linux, AI & Machine Learning, Object-Oriented Programming
Libraries/Frameworks: TensorFlow, PyTorch, scikit-learn, BERT, GPT, Matplotlib, Seaborn, Pandas, NumPy

RESEARCH & PROJECTS

Financial Market Report Matching Research   **2024 - 2025**
- Supported Dr. Simona Abis in capital market data restriction research alongside five colleagues
- Developed Python-based scripts to match analysts with brokerage firms across financial datasets
- Utilized cosine similarity, fuzzy matching, and frequency analysis to build reliable associations
- Streamlined automated data-matching workflows, replacing time-intensive manual processes.

Machine Learning Model Research for ESG Intent Detection   **2024 - 2025**
- Collaborated within a research team of six undergraduates under Dr. Simona Abis
- Developed BERT and GPT based models to classify company sustainability scores by intent
- Engineered ESG datasets and built preprocessing pipelines for clean, scalable text inputs.
- Conducted correlation studies to assess how prompt variables affect classification accuracy
- Utilized models to translate sustainable-investing research into actionable investor insights.

NLP Political Sentiment Company Classifier   **2024**
- Worked within a team of five to develop & apply Naive Bayes, Bidirectional LSTM, & RNN models
- Scraped and tokenized text from public HuggingFace datasets for effective model development
- Utilized open-source ML frameworks including TensorFlow, PyTorch, & scikit-learn
- Applied effective and accurate models to evaluate sentiment across leading news corporations
- Presented analytical visualizations to advise audiences on latent political bias and sentiment trends across major news organizations.

Portfolio Website @ https://jsallred.github.io/

WORK EXPERIENCE

Student Board Officer – CU Boulder Club Swim Team – Boulder, CO   **2023** - **2024**
- Organized travel logistics and expenses for meets in and out of state for the '23 - '24 season

Assistant Swim Coach – Highlands Sharks Swim Team – Fremont, CA   **2022** - **2023**
- Provided elementary through advanced instruction for 100+ swimmers ages 6 through 18
- Coached the team through League Championships 2022 & 2023 winning the League Spirit Award

Lifeguard / Swim Instructor – Highlands Sharks Swim Team – Fremont, CA   **2019 - 2022**
- Provided one-on-one swim instruction for children & adults
- Facilitated a friendly & engaging lesson environment to support each client's personal needs