# Andy Jiang

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### **EDUCATION**

## University of Maryland

Bachelor of Science in Computer Science

# SKILLS

Languages: C#, Python, Scala, JavaScript, C++, Java, SQL, HTML, CSS, Rust, Ruby, OCaml, MATLAB, Kotlin Data & AI/ML: MySQL, SciPy, Pandas, NumPy, Matplotlib, PyTorch, Scikit-learn, LangChain, Seaborn Cloud & DevOps: Databricks, Apache Spark, AWS (EC2, Lambda, S3), Docker, Git, CI/CD, Bash, Unix Frameworks & Technologies: ASP.NET, Django, Express.js, React.js, Node.js, MongoDB, ServiceNow, Tailwind

## Experience

# University of Maryland | Artificial Intelligence Researcher

June 2024 – Present

- Designed and optimized ETL pipelines to process and integrate large-scale datasets, reducing processing time by 50% for  $5{,}000+$  data points
- Evaluated robustness in AI systems through Generalized Adversarial Testing (GAT), aimed at strengthening the safety evaluations of LLMs against fine-tuning attacks and generalized adversarial attacks
- Leveraged machine learning algorithms to develop advanced tokenization techniques for different data types and linguistic challenges, improving model segmentation accuracy by 15%

## **NASA** | Software Engineer Intern

June 2023 – December 2023

- Leveraged ServiceNow and agile/SCRUM development methodologies to develop and launch NOVA (NASA OCHCO Virtual Agent) agency wide, reaching 1,400+ users within launch week
- Developed a centralized employee database and internal HR portal by integrating NASA's ServiceNow HR system with a MariaDB (MySQL) backend using a custom Node.js/React.js application, and built REST endpoints to support advanced filtering and reporting across 2,500+ employee records
- Developed a prototype virtual agent using GPT-3.5 Turbo to enhance response accuracy and efficiency by 400%, leveraging document parsing techniques and PDF analysis to deliver contextually relevant results

#### Great Wall Inc. | Software Engineer

September 2019 – August 2021

- Designed and implemented a full-stack e-commerce web application for Great Wall Chinese Restaurant using C#, JavaScript, and ASP.NET, generating over \$250,000 in annual revenue through online ordering
- Developed a custom authentication and authorization system using ASP.NET Identity, featuring secure password hashing (PBKDF2), cookie-based session management, password recovery, and role-based access control; implemented robust input validation using C# Data Annotations to ensure user data integrity
- Developed an online ordering system and integrated a secure payment-ready workflow with SQL Server backend, increasing online order volume by 35% within 3 months
- $\bullet$  Integrated data visualization tools for website data analytics, increasing sales conversion by 35% via trend analysis of customer preferences

## PROJECTS

## High-Performance ETL Pipeline | Python, Pandas, Dask, PyArrow, PostgreSQL, SQLAlchemy

February 2024

- Designed a scalable ETL pipeline utilizing parallel processing and incremental loading, improving data throughput for large-scale dataset integration
- Developed fault-tolerant data extraction from CSV, databases, APIs, and Parquet files, ensuring seamless schema evolution
- Deployed on Kubernetes with CI/CD integration, enabling real-time monitoring and automated deployments