Jonathan Ryan Williams

AI/ML Engineer | Gen AI | NLP | Python Developer

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PROFILE SUMMARY

Innovative AI Engineer and Backend Developer with a proven track record in designing, building, and optimizing large-scale architectures. Adept at leveraging AI-driven solutions to solve complex problems while ensuring high-performance and scalable systems. Expert in DevOps and cloud platforms (AWS, GCP, Azure) for seamless deployment, monitoring, and automation. Skilled in collaborating with cross-functional teams to deliver reliable, innovative, and scalable data solutions that meet business needs.

SKILLS

- **Core AI & Machine Learning Skills:**
  Model development, NLP, deep learning, Big Data Processing
- **Backend Engineering:**
  Scalable API design, microservices, event-driven architecture, Amazon S3, Google Cloud Storage, Azure Data Lake Storage
- **Databases and Storage:**
  Relational Databases: MySQL, PostgreSQL, Oracle, SQL Server, Amazon RDS, Google Cloud SQL, Azure SQL Database
  NoSQL Databases: MongoDB, DynamoDB, CouchDB, Redis, Firebase, Google Firestore, Amazon DocumentDB, Azure Cosmos DB
  Data Lakes: Amazon S3, Google Cloud Storage, Azure Data Lake Storage
- **Cloud Platforms and Services:**
  Amazon Web Services (AWS), Google Cloud Platform (GCP), Microsoft Azure
- **Programming and Scripting Languages:**
  Python, C#, Node.js, Php, Java, Bash, Shell Scripting, JavaScript, JSON
- **DevOps and CI/CD for Backend Engineering:**
  GitHub Actions, Bitbucket Pipelines, GitLab CI/CD, Docker, Kubernetes , Jenkins,
- **Data Security and Compliance:**
  Data Encryption, SSL/TLS, IAM (Identity and Access Management), Secure Data Pipelines, Role-Based Access Control (RBAC), Attribute-Based Access Control (ABAC), PKI (Public Key Infrastructure)
- **APIs and Integration:**
  RESTful APIs, GraphQL, gRPC, JSON-RPC, API Gateway, API Management, SDK Development, Webhooks, Event-Driven Architecture, Microservices, Service Mesh, API Security, API Versioning, OAuth2, JWT, CORS
- **Version Control and Collaboration:**
  Git, GitHub, GitLab, Bitbucket, Jira, Trello, Slack, Microsoft Teams, Zoom, Google Meet, Miro, Code Reviews, Pull Requests, Technical Documentation, Agile Methodologies

PROFESSIONAL EXPERIENCE

AI Engineer & Backend Developer | Global Precisional Services LLC   Nov 2024 – April 2025 | Wilmington, DE

- Lead development and optimization of **AI-powered backend systems** for quantity takeoff and cost estimation processes by analyzing PDF CAD drawings using **Python, NLP, OCR, Generative AI, and GCP**
- Designed and implemented an automated workflow and payment integration using **Python, Wix, Webhooks, and Stripe.**

AI Engineer & Backend Developer | Elastic   July 2022 - Aug 2024 | Mountain View, CA

- Lead development and optimization of **AI-powered backend systems** for large-scale applications in **enterprise IT solutions** and **cloud computing**.
- Designed and implemented **scalable, microservices-based architectures** to serve AI models in production environments using **Python, Node.js, and AWS**.
- Built and deployed **machine learning models** for predictive analytics and recommendation systems, improving product features and user engagement.
- Integrated **real-time data processing** and **AI-driven APIs** into backend services using **Apache Kafka, Redis, and SQL/NoSQL databases**.
- Collaborated with cross-functional teams on **cloud platform migrations** (AWS, Azure, GCP) and continuous deployment pipelines using **Docker, Kubernetes, Terraform, Jenkins**, and **CI/CD tools**.
- Ensured data security, compliance, and performance optimization, contributing to a 30% increase in system efficiency.

  Technologies/Tools: Python, Node.js, AWS, AWS Glue, AI/ML Integration, Apache Kafka, Redis, NoSQL, TensorFlow, Scikit-learn, Docker, Kubernetes, QAuth2/JWT

AI Engineer & Cloud Backend Developer | Workday   Jan 2018 - Jan 2022 | Frisco, TX

- Developed and deployed **AI-driven models** for **enterprise resource planning (ERP)** and **predictive analytics** in production environments.
- Collaborated in the design of **serverless architectures** on **AWS Lambda** and **Google Cloud Functions**, reducing server costs by 25%.

- Created and maintained backend systems for AI projects, including model training, optimization, and integration into cloud databases.Key Accomplishments
- Implemented **data ingestion pipelines** using **Apache Kafka**, **Airflow**, and **AWS S3**, ensuring seamless data flow across various cloud environments.
- Worked with cross-disciplinary teams to improve AI model performance by analyzing system logs, tracking metrics, and addressing system bottlenecks.

Technologies/Tools: Python, PyTorch, Hugging Face, Node.js, AWS Lambda, Amazon S3, Google Cloud Storage, Google BigQuery, Google AI Platform. Apache Kafka, AWS Glue

Junior Backend Developer & Machine Learning Intern | Capital One June 2016 - May 2017 | McLean, VA / Remote

- Assisted in backend development for **AI-driven applications** and worked closely with the AI team to integrate machine learning models into **financial applications**.
- Developed automated scripts for data preprocessing, feature extraction, and model training pipelines using **Python** and **Scikit-learn**.
- Enhanced the performance of existing APIs by implementing caching mechanisms (Redis) and optimizing database queries (PostgreSQL).
- Contributed to optimizing backend services to ensure efficient model inference and deployment in real-time systems.
- Gained hands-on experience in cloud environments (AWS, GCP) and CI/CD pipelines using **GitHub Actions** and **Jenkins**.

Technologies/Tools: Python, Django, FastAPI, PyTorch, Node.js, Google AI Platform, Redis, MongoDB, Celery, SSL/TLS, OAuth2/JWT

EDUCATION

Bachelor of Science in Computer Science   August 2011 - May 2015 | Texas,US
Texas A&M University

Master of Science in Artificial Intelligence   August 2016 - May 2017 | CSCE 631-Intelligent Agents Course

LANGUAGES

English