

# Stephen Y. Hwang

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## Skills

<b>Certifications</b>	AWS Certified Solutions Architect (Associate), MongoDB Database Administrator, MongoDB Developer
<b>Language</b>	Python, R/Shiny, JavaScript, SQL, Perl
<b>Databases</b>	MongoDB, MySQL, Postgres, BigQuery, Snowflake, Redshift, EMR
<b>Data processing</b>	Kafka, Airflow, Google Dataproc (Spark)
<b>Data integration</b>	FastAPI, SNS/SQS, Prometheus, Google Looker (Data Studio), Tableau, ggplot
<b>Other tooling</b>	git, Docker, MLFlow, Infrastructure-as-code (Terraform, CloudFormation)

## Professional Experience

<b>Solutions Engineer (Applied AI/ML &amp; Search)</b>	Research Triangle Institute, RTP, NC	July 2023 - present
<ul style="list-style-type: none"><li>Architected and deployed AI/ML enterprise applications for semantic classification and data harmonization</li><li>Leveraged Chain-of-Thought to optimize retrieval-augmented generation (RAG) pipelines for domain-specific applications</li><li>Designed and implemented complex ETL/ELT pipelines to extract business value from proprietary data</li><li>Designed and built scalable FastAPI interfaces to connect modular components in data platform</li><li>Built and orchestrated containerized applications using FastAPI within ETL workflows to streamline model training, evaluation, and inference</li><li>Developed hybrid search solutions combining full-text Lucene search with vector search to augment information retrieval</li><li>Designed and developed LLM-powered chatbots requiring session and memory management while adhering to data privacy and security requirements</li><li>Provided technical enablement and documentation of platform architecture</li></ul>		
<b>Enterprise Presales Solutions Engineer</b>	MongoDB, New York, NY	Jan 2022 - Jul 2023
<ul style="list-style-type: none"><li>Collaborated with sales teams to support and onboard enterprise customers in healthcare and financial services</li><li>Designed and deployed scalable data layer solutions to fulfill business and compliance requirements for digital payments, consumer lending, and management of electronic health records and biometric data</li><li>Advised customers on best practices for data modeling, distributed computing, and event-driven architectures</li><li>Led technical discovery sessions, delivered tailored demonstrations, and built proof-of-concepts for customer validation</li></ul>		
<b>Senior Bioinformatics Data Scientist</b>	Research Triangle Institute, RTP, NC	Jun 2015 - Jan 2022
<ul style="list-style-type: none"><li>Designed and implemented a scalable, event-driven cloud framework to automate bioinformatics workflows</li><li>Led cross-functional teams of analysts and developers as a technical lead and program manager</li><li>Developed and optimized ETL pipelines to ingest, process, and integrate multimodal biological and clinical data, enabling reproducibility and improving data accessibility and downstream analytics.</li><li>Built interactive dashboards to enable data-driven decision-making for critical stakeholders</li><li>Translated complex technical concepts into actionable insights for non-technical stakeholders, ensuring alignment between business requirements and bioinformatics solutions.</li></ul>		
<b>Lead DevOps Engineer</b>	Oncotect, Raleigh, NC	Jan 2021 - Jan 2022
<ul style="list-style-type: none"><li>Designed and established pipelines to ingest, process and store experimental biomedical data</li></ul>		
<b>Bioinformatics Data Scientist</b>	Johns Hopkins Medical Institutions, Baltimore, MD	Oct 2011 - Jun 2015
<ul style="list-style-type: none"><li>Utilized Python to develop visualizations and to implement machine learning methods for exploratory analysis</li><li>Developed and maintained data pipelines to promote data interoperability across disparate public health and lab systems</li><li>Developed pipeline to aggregate public health and genomic data, improving the legacy workflow by 7000%</li></ul>		

## Education

<b>Johns Hopkins University</b>	M.S. Bioinformatics, Aug 2013	Baltimore, MD
<b>Loyola University</b>	B.S. Bioinformatics, May 2011	Chicago, IL