

Chih-Hsing (Hathaway) Chen

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EDUCATION

Virginia Tech

Master of Engineering in Computer Science

Concentrate in Software Engineering and Machine Learning

Falls Church, VA

Expected May 2025

WORK EXPERIENCE

Big Data Platform Engineer Intern

Eviden

Reston, VA

Aug. 2024 - Jan. 2025

- Improved system performance by **30%** through optimization of **DNS** resolution and cloud-based networking
- Managed **10+** **AWS EC2** instances with **Kubernetes**, enabling the deployment of scalable, distributed data processing clusters handling over **50TB** of data daily
- Optimized real-time data streaming pipelines with **Apache Kafka** and **Flink**, efficiently handling millions of events per second and ensuring reliable delivery across distributed systems
- Integrated **Grafana** with **Elasticsearch SIEM** to visualize security events, enabling real-time monitoring and alerting for improved incident response
- Automated data workflows with **Apache Airflow** and **Spark**, enabling scalable real-time analytics

Graduate Research Assistant

Virginia Tech

Falls Church, VA

May 2024 - Aug. 2024

- Developed an **ETL pipeline** integrating **Kafka** for regex-based filtering to clean YouTube API data
- Stored processed data in **AWS Redshift** for efficient querying and reduced API dependence
- Applied **Latent Dirichlet Allocation** for topic modeling, extracting scam-related topics covering the top **15%** of overall distribution
- Created **Tableau** dashboards to visualize topic distributions and insights, facilitating collaboration with the FTC

Software Engineer Intern

Clocky

New York, NY

May 2024 - Jul. 2024

- Constructed **responsive design** with **Media Queries**, integrated **Framer Motion** for smooth animations, and resolved **30+** frontend layout issues on the e-commerce site
- Enhanced e-commerce functionality with **React** for dynamic interfaces and **GraphQL** for efficient data handling, enhancing user interaction and reducing load times by **20%**
- Devised scalable backend services with **Serverless APIs** and optimized caching using **Redis** for improved performance

Software Engineer Research Intern

Academia Sinica

Taipei, Taiwan

Jun. 2021 - Aug. 2023

Achievement: Lead Author for [2023 11th International IEEE/EMBS Conference on Neural Engineering \(NER\)](#)

RELEVANT PROJECTS

Bookstore Web Development (*HTML, CSS, React, TypeScript, Java Servlets, REST APIs*) [Link](#)

Aug. 2023 - Dec. 2023

- Developed a full-stack bookstore application using **Java** and **React**, integrating **SQL**, **Servlets**, and **RESTful APIs** for efficient inventory management
- Designed and deployed a scalable short URL system on **AWS**, leveraging **EC2**, **RDS**, **ELB**, and CI/CD workflows for high availability

Automatic Adhesive Capsulitis Assessment Systems (*Python, pandas, scikit-learn*) [Link](#)

Spring 2022

- Addressed data imbalance using **SMOTE** and enhanced ensemble models (**Random Forest**, **Gradient Boosting**), resulting in a **32%** performance improvement in internal testing
- Designed and implemented data pipelines for clinical trials using **Python** (**pandas**, **PySpark**) to process and analyze large-scale wearable IMU datasets efficiently

SKILLS

Frontend JavaScript, TypeScript, HTML5 | React, Vue

Backend Python, Java, C++, C#, .NET, Kotlin, Golang (Go), Node.js, Scala, SQL | Django, Flask | MySQL, PostgreSQL, MSSQL, MongoDB, Redis | Hive

AWS Certificate: [AWS CLF-C02](#) | API Gateway, Aurora, CDK, CloudFormation, DynamoDB, EC2, ECS, EKS, ELB, Lambda, RDS, Route53, S3, VPC, AWS QuickSight

Others Docker, Kubernetes, Terraform | CI/CD, Jenkins | Airflow, ElasticSearch, Grafana, Kafka, Apache NiFi, JUnit