CLEMENT OU

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EDUCATION

- **Carnegie Mellon University** — Pittsburgh, PA
  B.S. in Statistics and Machine Learning, Minor in Machine Learning — *May. 2025*
  - **Relevant Coursework:** Algorithms & Data Structures, Software Engineering, Computer Systems, Web Development, Distributed Systems, Cloud Computing, Networking, Deep Learning, Distributed ML, Probability and Inference
  - **Activities:** Students Using Data for Social Good (Data Project Chair), Data Science Club (Competitions & Outreach Director)

EXPERIENCE

- **CMU Software and Societal Systems Department** — Pittsburgh, PA
  Teaching Assistant — *Aug. 2024 – Present*
  - Reviewed student projects for OOP principles and design patterns, providing detailed feedback on code quality and style.
  - Led weekly recitations and office hours for 30+ students, mentoring on software engineering concepts and best practices.
- **Quantifind** — Palo Alto, CA
  Data Science Intern — *Jun. 2024 – Aug. 2024*
  - Engineered ETL pipeline in Scala, integrating 130k entities and 300k structured sanctions into core product.
  - Built scalable NLP model using LightGBM and PySpark, achieving 95% precision classifying risk in 50M documents.
- **CMU Language Technologies Institute** — Pittsburgh, PA
  Research Assistant — *Dec. 2023 – May. 2024*
  - Designed and implemented RESTful API for Sotopia platform using LangChain, facilitating AI agent benchmarking.
  - Conducted experiments to quantify social intelligence of AI agents, leveraging OpenAI API for data collection and analysis.
- **Jabil** — San Jose, CA
  Software Engineer — *Sep. 2022 – Apr. 2023*
  - Developed full-stack React/Django web app for inventory and test flow management, improving efficiency by 30%.
  - Created automated testing scripts in C++ and Python, reducing manual testing time by 50%.
  - Led testing team, established Agile methodologies, and liaised with client project managers.

PROJECTS

- **Poker AI Competition:** Full-Stack Web Application and Cloud Infrastructure with a $100,000 prize pool.
  - Architected full-stack web application using React, Node.js, and PostgreSQL, supporting 500+ participants.
  - Engineered containerized game engine and CI/CD pipeline on GCP Kubernetes, enabling millions of AI poker matches.
  - Led team of 30 developers, implementing Agile methodologies to deliver project milestones on schedule.

- **WeCloud:** Scalable Microservices Web Application.
  - Designed and implemented RESTful API for social chat app using Spring Boot and Docker, supporting 100,000+ users.
  - Orchestrated containerized microservices on GCP and Azure Kubernetes, achieving 99.9% uptime and 100% availability.

- **Emotion Detector:** Real-time Emotion Classification Web App.
  - Developed CNN model using TensorFlow and OpenCV, achieving 95% accuracy in classifying six human emotions.
  - Built data pipeline to collect and label 500,000 images using Bing API and OpenCV.
  - Created scalable Django web application, integrating the emotion detection model for real-time analysis.

- **Zoom AI Companion Red-Teaming:** Governance/Security Evaluation (CMU AI Governance Best Project Award)
  - Conducted experiments to evaluate risks in AI products, identifying vulnerabilities in data handling and LLM safeguards.
  - Proposed solutions to mitigate risks, such as derisking processes and adapting standardized privacy frameworks.

TECHNICAL SKILLS

- **Languages**: Python, Java, C/C++, SQL, Typescript/Javascript, Scala, HTML/CSS

- **Frameworks & Libraries**: Spark, PySpark, LangChain, PyTorch, Django, Node.js, React

- **Tools & Platforms**: Hadoop, Docker, Kubernetes, Linux, Git, Databricks, GCP, AWS, Terraform