

Jack Thomas

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Backend Software Engineer

Education

B.S. Computer Science | California State University, Fullerton, CA | May 2026

GPA: 3.96 / 4.0

Experience

Backend Software Engineer | TradeCRE

June 2024 – Present

- Designed and implemented a Django/PostgreSQL backend for multi-party transaction workflows with strict access-control invariants
- Built a permission model supporting ownership, read/write sharing, and group access, preventing unauthorized cross-user data exposure
- Designed a client-side encryption protocol with explicit server trust boundaries, ensuring the backend never processes plaintext sensitive data
- Implemented key lifecycle handling for shared resources, including invalidation and re-keying when user keys or access change
- Refactored sharing and validation logic to eliminate backend data exposure caused by overly permissive client payloads

Projects

OKC — Document Ingestion & Knowledge Extraction Pipeline

- Designed a multi-stage pipeline to ingest large document corpora, extracting sentences, entities, relations, and topic graphs
- Optimized pipeline structure for throughput and iterative experimentation on thousands of documents

Technical Skills

- **Backend:** Python, Django, REST APIs, PostgreSQL
- **Systems:** Relational modeling, access control, encryption boundaries, ingestion pipelines
- **Infrastructure:** Docker, Nginx, Linux, TLS
- **Applied ML:** Reinforcement learning, data pipelines