

# Tim Hung

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## WORK

### **Bloomberg L.P.**

New York, NY

**Senior Software Engineer** — Autocomplete (*C++, Python, Kafka, Redis*)   **05-2019 – PRESENT**

- Led project to scale a system for ranking Autocomplete results based on real-time hits data
  - Architected low latency data pipeline for user hits using Kafka, DB sinks, and multi-level caching
  - Sharded architecture across distributed cluster to concurrently handle 2k+ msg/s
  - Reduced E2E latency to <50ms including investigating and uncovering a bug in Comdb2
  - Devised a method to rank results by aggregating hits with exponential decay
  - Built telemetry framework to monitor throughput, latency, and system health
  - Laid the foundation for subsequent projects to enrich Autocomplete with real-time user history
- Designed a configurable self-service procedure to validate Autocomplete data ingestion
- Improved core Autocomplete query tokenization algorithms
- Envisioned and built MVP for a tool to visualize/replay past user queries in real-time
- Broader Work:
  - Rearchitected a company-wide infra change by consolidating redundant machine-state services
  - Ported legacy codebase to Py3.10 & C++17, modernized CI, set standard for comprehensive testing
  - Heavily involved in recruiting: speaking on panels, D&I, interviewing, mentoring

**Software Engineer** — Data Intelligence (*Python*)

**10-2018 – 05-2019**

- Automated large scale data migrations by building high performance ingestion daemons
- Enriched internal machine learning infrastructure tools with improved visualizations

**Software Engineering Intern** — Data, Web, & Analytics (*JS, C#, Angular*)

**06-2017 – 08-2017**

- Leveraged global geolocation data to refine search functionality with responsive map views

### **Microsoft**

Bellevue, WA

**Software Engineer / Product Manager Intern** — Cortana (*Azure, C#*)

**05-2016 – 08-2016**

- Developed platform to extend Cortana compatibility with over 340 new services

## SKILLS

**Languages:** Python, C++, JavaScript, Java, Bash, SQL

**Tools:** Kafka, Redis, Docker, Kubernetes, Git, Vim, Grafana, Humio, Agile

US Citizen, fluent in English and Mandarin

## SCHOOL

**Binghamton University, SUNY**, B.S. Computer Science, B.A. Mathematics

**2013 – 2018**

ACM Student Chapter Chair and ACM ICPC Coach, *ILME* Math Honor Society

Course Assistant for CS140 Object Oriented Programming

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