Jose Hernandez

back-end systems engineer and data scientist

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EDUCATION

June 2017 **Stanford University** // Computer Science Major and Mathematics Minor
Concentrations in Artificial Intelligence and Computer Systems

June 2013 **Illinois Math and Science Academy**

EXPERIENCE

Summer 2016
New York

Facebook // Software Engineering Intern // Messenger Infrastructure Team

- Created a multi-regional cache (from scratch) for our Messenger service, which significantly decreased database iops and decreased the size of our working set.
- Integrated dashboards and datasets to isolate the cause of cache inconsistencies
- Developed my own milestones, action items, and service-specific success metrics
- Worked with other teams to decide which internal services best served our use case
- Updated the structure of GraphQL queries in a live system to optimize for the structure of our database and simplify the interactions between two particular mobile services.

Summer 2015
Menlo Park

Facebook // Software Engineering Intern // Search NLP Team

- Redesigned and optimized the path for grammar queries (e.g. "photos of Jose at Stanford"), which improved performance and complexity. Final code is in production.
- Decreased the number of expensive entity resolution queries (e.g. is "Jose" a user, group, event, etc.?) by leveraging cached entities and query-intent classifier.
- Back-end work in C++, front-end in PHP, and extra tasks in Python & SQL.

2015—present **Stanford InfoLab** // Undergraduate Researcher

- Studied closed-caption files of Stanford's MOOC lectures to extract course keywords, and computed pointers into the lectures to see when these keywords are used.
- This helps optimize the experience of most online learners. Most learners come in for specific pieces of knowledge, and navigating videos with this is much easier.
- Leveraged Wikipedia as an external source of knowledge and integrated natural-language processing techniques with TF-IDF to extract keywords. We exclusively used unsupervised learning algorithms for keyword extraction and ranking.
- Published and presented our work in the 2016 Educational Data Mining Conference

2015—present **Stanford CS106** // Section Leader

- Led a weekly discussion section of 8-12 students in the intro CS classes (C++ and Java)
- Graded my students' work for functionality and style, to instill best practices for coding
- Debugged students' code during weekly office hours (everything up to seg. faults)

SKILLS & INTERESTS

Languages // C++ • Python • C • HACK/PHP • Java • Objective-C • SQL
Skills // module design, distributed systems, applied data science, statistical analysis
Interests // STEM education, urban city development, Stanford bicycle project