

# NICHOLAS GUERRERO

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## Summary:

Computer Science Masters graduate with a passion for Full Stack Software Engineering, Data Science, and Cryptography. Seeking full-time roles to apply my skills and knowledge to real-world challenges. Solid foundation in machine learning, algorithms, web technologies, computer networking, operating systems, database systems, applied cryptography, and information retrieval.

## EXPERIENCE

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### City National Bank – Data Management Officer

November 2017-January 2020

- Designed SQL table schemas for an enterprise relational database. Data organization led to 30% increase in compliance rates
- Visualized results of Federal Model Edit Check Reports using Python for computation and different visualization tools
- Developed an automated system to provide daily model risk evaluation reports to team leads using Python and SQL queries
- Performed in a cross-functional team acting as a liaison between Software Engineering department and the Business Units
- Built full-stack Python Flask-App utilized to run data validation tests on incoming monthly data feeding into enterprise database

### NASA, Jet Propulsion Laboratory – Jr. Data Scientist

March 2017-November 2017

- Trained a recommendation engine using Scikit-Learn and Gensim to recommend different IT products to JPL staff
- Managed the Mongo No-SQL databases of the team's enterprise IT platform, improved data quality by 50%
- Collaborated with team's Web Developer to prototype & integrate Machine Learning Models into platform backend
- Designed & helped implement a new ticketing/response system increasing IT team ticket resolution rate by 15%
- Created a reporting structure to identify what departments were having chronic IT issues

### City National Bank – Intern CCAR Data Analyst

September 2016-March 2017

- Reported on incoming edit check feedback from United States Federal Reserve CCAR testing team

## EDUCATION

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### University of Southern California

Los Angeles, CA

#### Master of Science, Computer Science

August 2021-May 2023

Relevant Coursework: Machine Learning, Analysis of Algorithms, Web Technologies, Computer Networking, GPA 3.8  
Programming System Design, Operating Systems, Database Systems, Applied Cryptography, Information Retrieval

### Whittier College

Whittier, CA

#### Bachelor of Arts, Economics emphasis on Math/Business

September 2012-June 2016

Relevant Coursework: Econometrics & Statistical Models, Financial Derivates & Accounting, GPA 3.5  
Game Theory

## PROJECTS

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### Chess Analysis ChatGPT React App

September 2016-March 2017

Chess analysis app written with MERN stack and chatGPT Api JavaScript library to analyze chess moves. React Front End, Node.js backend connected to a Mongo No-SQL database and Express.js for middleware, routing, and HTTP functionality

### Weenix Operating System

September 2022-December 2022

Coded Process Management, Memory Management, File System, Device Drivers, and Network Stack from scratch in C programming language

### RSA/AES Cryptosystem

January 2022-March 2022

Implemented a cryptosystem using AES-128 to encrypt data and RSA (OAEP) to protect AES keys in Python with Pycryptodome

### TCP/UDP Socket Programming

September 2021- December 2021

UNIX socket programming network model in C++ of a social matching service where two clients issue a request for finding compatibility. Requests are sent to a Central Server to interact with three other backend servers for pulling information and data processing

## SKILLS

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**Programming Languages and Software Tools:** Python, C++, Java, JavaScript, SQL Server & NoSQL Databases, Linux, OSx, Windows, Git, Jira, Operating Systems, React, Typescript, Node.js, HTML, CSS, Material UI, Next.js, AWS, Pytorch, Tensorflow