Parth Chopra

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Education

University of California, Berkeley *Aug. 2017 – May 2021*
B.S. Electrical Engineering and Computer Science **GPA: 3.67**

- **Relevant Coursework**: Efficient Algorithms and Intractable Problems, Data Structures, Discrete Mathematics, Designing Information Systems and Devices, Computer Architecture, Principles of Data Science, Artificial Intelligence, Computer Security, Internet Architecture and Protocols, Probability and Random Processes (IP)

Skills

Languages/Libraries: Python, Scala, Java, C/C++, SQL, Go, Ruby, Pandas, NumPy, Scikit-learn, Keras, SpaCy
Tools: Creative Cloud (Ps, Ai, Xd), Sketch, Spark, MapReduce, PostgreSQL, Azure/AWS, Linux, Git, Flask, IDEs

Experience

Twitter, *Software Engineering Intern* | San Francisco, CA *Jun. 2020 – Sep. 2020*

- Led initiative to refactor *app-proxy*, a distributed Thrift service supplying app data for ads served on mobile/web
- Integrated new Manhattan R/W database to support rendering of app icons and screenshots for *app-proxy* clients
- Built Strato client interface in Scala with a caching layer backed by Kafka, improving p999 latency by factor of 15
- Devised unit testing framework using Mockito and ScalaTest, allowing deprecation of legacy *app-proxy* endpoint
- Launched app icon experiment for Android clients, leading to 5.9% increase in installs per click for mobile app ads

Berkeley SkyDeck, *Co-Founder, Bids Events* | Berkeley, CA *Apr. 2019 – Dec. 2019*

- Designed and wire-framed complete user interface for compatibility with Xcode 11 and Android Studio
- Structured and managed NoSQL database (Firebase), deriving real-time user insights using Google Analytics
- Conducted usability testing and heuristic evaluations with Berkeley students for improvements in user experience
- Launched in Jan. 2019, securing over 10,000 student users at Berkeley; accepted into Y Combinator Startup School

Synapse Capital, *Data Science Intern* | San Francisco, CA *Sep. 2018 – Mar. 2019*

- Conducted EDA using time-series data on crypto volume movements to identify trends and buy/sell indicators
- Presented moving average trends found for 10 different cryptocurrencies as interactive visualizations
- Designed unsupervised models to forecast price movements on early-stage PoS tokens by web-scraping Reddit feeds
- Developed and validated new trading strategy based on the mean reversion property of financial time-series

SymphonyAI, *Software Engineering Intern* | Los Altos, CA *Jun. 2018 – Sep. 2018*

- Improved current Lucene-based search backend (Elasticsearch) by targeting textual semantics in user queries
- Developed Python API with functionality in Apache Spark, improving search precision and recall by 17%
- Trained a bi-LSTM with a CRF layer using open-source medical ontologies for domain-specific entity extraction
- Integrated NER model in current system pipeline to assist with automatic curation of patient health records

Projects

bearMatch: *Python (Flask, Gunicorn), JavaScript, HTML/CSS, PostgreSQL*

- Created web service for students to meet potential crushes by sending anonymous 'like' emails from SMTP server
- Achieved 1500+ signups within 24 hours, with requests asynchronously handled and data written to Postgres DB

brAInstorm: *JavaScript (Node.js), EJS, HTML/CSS*

- Node.js application providing insights on student college essays using Watson's Bluemix API on IBM Cloud
- Training essays embedded as feature vectors and clustered using *k-means* to help determine closest school fit

Mini-Maps: *Java*

- Implemented back-end webserver for web-mapping application, optimizing image rastering and route search
- Leveraged A* algorithm to optimize shortest path search, parsing location data from the OpenStreetMap project

Honors

United States of America Mathematical Olympiad (USAMO) Qualifier: Approximately 270 of the top scoring AMC 12 participants are invited (based on combined AMC 12 & AIME scores) to participate.

American Mathematics Challenge (AMC 12): Second place nationwide (Canada) and three-time qualifier for the American Invitational Mathematics Examination (AIME), awarded to the top 2.5% of participants.