Parth Chopra

www.parthchopra.me
github.com/parthematics

Email: parth.chopra@berkeley.edu
Mobile: (510) 725-8429
linkedin.com/in/parthematics

Education

University of California, Berkeley *Aug. 2017 – May 2021*
B.S. Electrical Engineering and Computer Science **GPA: 3.62**

- **Relevant Coursework**: Efficient Algorithms and Intractable Problems, Data Structures, Discrete Mathematics and Probability Theory, Designing Information Systems and Devices, Structure and Interpretation of Computer Programs, Computer Architecture, Principles and Techniques of Data Science (IP), Artificial Intelligence (IP)

Experience

Berkeley SkyDeck, *Co-Founder, Bids Events* | Berkeley, CA *June 2019 – Present*

- 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 *Summer 2018*

- Improved current Lucene-based search backend (Elasticsearch) by targeting textual semantics in user queries
- Leveraged knowledge graphs to generate unique sentence embeddings based on semantic features and similarities
- 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

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

- Node.js application providing insights on student college essays using Watson's Bluemix API on IBM Cloud
- Developed scoring algorithm based on a normalized weighted sum model using textual features such as tone
- Training essays embedded as feature vectors and clustered using *k-means* to help determine closest school fit

Waves: *Python—Librosa, NumPy, TensorFlow*

- Developed music analyzer able to identify among ten genres of music given a 30-second audio sample
- Performed FFT on preprocessed data; Mel-frequency cepstrum coefficients (MFCCs) used as input for CNN

SMS Birth Registration: *Python (Django, RapidSMS), PostgreSQL*

- Led a team initiative to help increase birth registration in Nigeria through an intuitive, centralized SMS client
- Users text a number to record new births; RapidSMS handles requests and updates data in Postgres database

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

Skills

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

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.