Parth Chopra

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Education

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

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

Skills

Languages: Python, Java, C/C++, SQL, Solidity, JavaScript, HTML/CSS, RISC-V, Lisp, Go, React.js, Shell, LaTeX
Libraries: Pandas, NumPy, Plot.ly, Scikit-learn, TensorFlow, Keras, PyTorch, Quandl, Seaborn, SpaCy, Bokeh, BS4
Tools: Creative Cloud (Ps, Ai, Lr, Id), Sketch, Xcode, PostgreSQL, Azure, IDEs, OR-Tools, Blender, Linux, Git, Flask

Experience

Berkeley Skydeck, *Co-Founder, Bids Events* | Berkeley, CA — *May 2019 – Present*

- **UI/UX Design**: Designed and wire-framed complete user interface for compatibility with Xcode 11 and Android Studio; conducted usability testing and heuristic evaluations for improvements in user experience.
- **Traction**: Secured user-base of over 10,000 students at Berkeley, launching on native platforms in January 2019. Accepted into Berkeley Skydeck and Y Combinator Startup School, gaining network of 15,000 founders.

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

- **Data Visualization**: Conducted EDA using Quandl time-series data on crypto volume movements to identify trends and buy/sell indicators for 10 different cryptocurrencies; results presented as interactive visualizations.
- **Statistical Modeling**: Designed unsupervised predictive models to forecast overall market price movements by performing sentiment analysis on web-scraped Reddit feeds of early stage proof-of-stake tokens, including DASH and NEO. Text sentiment was determined using a bag-of-words model and a curated dictionary of tagged words.

SymphonyAI, *Software Engineering Intern* | Los Altos, CA — *Summer 2018*

- **NLP**: Improved current Lucene-based search platform (Solr) through incorporating modern natural language understanding techniques, specifically through targeting textual semantics in user queries using Google's Universal Sentence Encoder. Developed Python API that improved search precision and recall by 17%.
- **Entity Recognition**: Leveraged deep neural network trained using open-source medical ontologies and journal abstracts (OpenClinical & PubMed) to assist with automatic curation of patient health records. Model was trained to recognize biomedical entities of interest and improve with user feedback, achieving an F_1 score of 0.91.

Projects

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

- Wrapper application providing insights on student college essays using Watson's Bluemix API on IBM Cloud. Developed scoring algorithm based on textual features such as tone, comparing them to a preset essay bank.

Waves: *Python—Librosa, NumPy, TensorFlow*

- Musical analyzer able to identify among ten genres of music given a 30-second sample. Performed FFT on preprocessed data, obtaining Mel-frequency cepstrum coefficients (MFCCs) to use as input for a CNN.

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

- Pilot Project aiming to increase birth registration in Nigeria through a centralized SMS client. Users text a number to record new births; RapidSMS handles mobile requests and updates data in public PostgreSQL database.

Yelp User Preference Visualization: *Python (Flask)*

- Map visualization tool enabling users to create a colored map indicating regions the user should visit based on their food preferences. Nearby restaurants were clustered using *k-means* and partitioned as a colored Voronoi diagram.

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.