ARPANDEEP KHATUA

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EDUCATION

University of Illinois at Urbana-Champaign   August 2019 - Dec 2022
Bachelor of Science, Computer Engineering (Minor, Mathematics)   **Cumulative GPA − 4.00/4.00**
Edmund J. James Honors Scholar, Dean's List (2019 - 2022)
Relevant Coursework: Computer Systems Programming Honors, Data Structures Honors, Engineering Probability, Intro to AI, Algorithms and Models of Computation, Database Systems, Fundamental Mathematics, Deep Learning, Computer Systems Engineering, Number Theory, Digital Signal Processing, Machine Learning, Digital Systems Lab.

EXPERIENCE

Meta Inc.   May 2022 - Present
Software Engineering Intern (Live Community Experiences) - Gabe Ochoa   New York, NY

Facebook Inc.   May 2021 - Aug 2021
Software Engineering Intern (Commerce Shop Rankings) - Artem Zinchenko   Menlo Park, CA
- Built a product retrieval transformer model personalized to users based on their history and viewing habits with a 35% win over previous model.
- Optimized data collection pipeline by 6000% which will enable the team to run the pipeline in real-time.

IBM-Illinois C3SR Scholar ⭘ Advisor - Prof. Wen-Mei Hwu, Vikram Sharma   Sep 2021 - Present
- Generating a 600 million node heterogeneous graph dataset with 3 billion edges with over 120 million labelled nodes for node classification task.
- IGB provides over 85 times more labelled data than current available largest public graph dataset.

Undergrad Researcher ⭘ Advisor - Prof. Kevin C. Chang   Jan 2022 - Present
- Built a data driven search engine with ranking and retrieval models to scrape the web and create dynamic subtopic based summarized search results with 97% classification accuracy.

NCSA SPIN Fellow ⭘ Advisor - Dr. Stephen Downie, Dr. Boris Capitanu   Oct 2021 - Present
- Modified detectron2 segmentation model to classify and tag pages in the HathiTrust Digital Library in 5 major classes with over 95% accuracy.
- Developed pre-processing and post-processing algorithms to improve performance and further classify images into keywords for faster search over 17 million documents.

PROJECTS

Kaizen </> **- HackDuke Winner**   Dec 2020
- Built a custom NLP model to classify text based on mental health conditions and a web-page for easier access by patients and health-care professionals with an OCR and voice-to-text functionality.

CourseLoop </> **- HackThis Winner**   Aug 2020
- Auto-grading on text extracted from PDF assignments with a OCR pipeline, using NLP in python with 98%+ accuracy in 1 week. Reduced grading time by 50% utilizing better algorithms and libraries.

SKILLS

Very Knowledgeable: Python, C++, C, SQL. **Knowledgeable:** LC3, HTML, CSS, JavaScript, Git, Django, Flask LaTeX, Python Data/ML Libraries. **Familiar:** Unity, Blender, C#, React, MongoDB, Golang.

ACTIVITIES

ECE Pulse Corporate Committee (2020, 2021), PURE Undergraduate Researcher, ECE 110 & Honors Lab, ECE 210, ECE 391 Staff, HKN Honor Society Secretary/Corporate Director, Grainger Engineering Scholarship Recipient.