Shovit Bhari

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Summary

A physics lecture demonstration expert who explored the new avenues of Data Science, Machine Learning, Artificial Intelligence, and Quantum Computing during the pandemic lock down to get out of the comfort zone and solve real-world problems.

Skills Summary

- **Languages**: Python, R, SQL
- **Frameworks**: Scikit-Learn, nltk, spaCy, TensorFlow, PyTorch, NLTK, OpenCV, Pytesseract
- **ML/AI**: Supervised/Unsupervised Learning,Ensemble Methods, Deep Learning, NLP, Computer Vision
- **Tools**: Docker, GIT
- **Platforms**: Linux, Web, Windows, Arduino, Raspberry, AWS, GCP
- **Soft Skills**: Leadership, Time Management

Experience

- **JAMS Next** Remote
  AI Engineer (Part-time) *Dec 2020 - Present*
  - Instrumental in researching, prototyping, designing, implementing, and evaluating machine learning models for resume parsing, resume scoring, resume ranking, and resume matching with the job description.
  - Prototyped entity recognition of resume using nltk, Spacy and Streamlit.
  - Researched, prototyped (from research papers), built features, and optimized the state-of-the-art machine learning and deep learning techniques like LSTM, CNN, RCNN, etc. using scikit-Learn, Keras, TensorFlow on CPU/GPU environments for resume parsing, resume scoring, resume ranking, and resume matching with the job description.
  - Applied various transfer-learning techniques using pre-trained word like cosine similarity, BERT, Universal Sentence Encoder for text similarity tasks.
  - Developed/Tested/Maintained internal text-processing libraries using nltk and Spacy
  - Business problems solved: keyword generation, text/phrase prediction, and resume scoring.
  - Participate in all aspects of business development from market research and finance to operations and marketing, ensuring that the company's vision was followed.
  - Develop business plan including value proposition, product roadmap, revenue model, marketing strategies, traction generation, and team member recruitment.

- **California State University, Fullerton**
  Operations Systems Analyst *Dec 2018 - Present*
  - Work closely with students and faculty to better provide a learning experience in a lab.
  - Design, fabricate, prepare, set up, take down, and maintain laboratory/Demo apparatuses for lower and upper division physics labs and classes
  - Provide primary support for instructional demonstrations in lecture courses
  - Participate in laboratory curriculum development to improve lecture demonstrations and lower division laboratory
  - Provide, organize, and conduct regular viewing events with telescopes and portable planetarium for astronomy course, and for local schools and various community organizations.
  - Organize and conduct science outreach events with a variety of physics demonstrations for local area schools, community colleges, various community organizations.
  - Primary curator of the portable planetarium used for science and astronomy and public outreach.
  - Responsible for radiation safety in physics laboratories

- **California State University, Fullerton**
  Part-time Faculty *September 2018 - Present*
  - Teach calculus-based introductory physics class to future engineers and scientists
  - Teach introductory astronomy labs to non-science majors
  - Lecture on fundamental knowledge for physics and astronomy.

Projects

- **MagNet:Forecast Geomagnetic Storms** — Drivendata
  Data Science Competition — *October 2020-November 2020*
  - Predicted the DST index to forecast geomagnetic storms using the ARIMA model as well as LSTM Neural networks using real-time solar wind data with plenty of missing data. Cleaned and imputed the data using forward fill and interpolation methods.
  - Finished within the top 8% (group of four) among more than 600 participants in the competition.

- **Next Word Prediction-Smart Keyboard** — Coursera
  Capstone Project- Data Science Specialization — *July 2020 - August 2020*
  - Analyzed large corpus of text documents using Quanteda package in R to discover the structure in the data and how text is put together to build a predictive model.
  - N-Gram linguistic and Katz's back-off model were used to build a smart keyboard that predicts the next words based on the user input of the words.

Education

- **California State University** — Fullerton, CA
  MS-Physics — *January 2007 - January 2009*
- **Luther College** — Decorah, IA
  BA-Physics and Mathematics; Minor-Computer — *Aug 2002 - January 2006*

Certifications

- **Applied Data Science with Python** — University of Michigan
  Coursera — *August 2020*
- **Data Science Specialization in R** — JHU
  Coursera — *August 2020*
- **Becoming a Data Scientist** — Linkedin
  Linkedin Learning — *May 2020*
- **Machine Learning** — Stanford
  Coursera — *January 2020*
- **Master the Fundamentals of AI and Machine Learning** — Linkedin
  Linkedin Learning — *November 2019*

Publications

S.Bhari et al. (CLEO Collaboration) Improved measurement of branching fractions forΠΠ transitions among $\Upsilon(nS)$ states. Physical Review D79, 011103(R),2009

Y Ogawara, S Bhari, S Mahrley, Observations of the magnetic field using a smartphone. The Physics Teacher 55(3), 184-185, 2017

LR Hargreaves, S Bhari, B Ajdari, X Liu, R Laher. Differential cross sections for excitations of H2 by low-energy impact. Journal of Physics B: Atomic, Molecular and Optical, 2017