

Sailendra Akash Bonagiri

+1(530) 933 7400 | bsakash1999@gmail.com | linkedin.com/in/akash-bonagiri | github.com/BSAakash

EDUCATION

University of California, Davis

Masters in Computer Science

- Graduate Student in Computer Science at UC Davis

California, USA

September, 2022 - Present

Birla Institute of Technology and Science, Pilani (BITS PILANI)

Bachelor of Engineering in Electronics and Communication

- Undergraduate Student in ECE at BITS PILANI

Hyderabad, India

August, 2017 - May, 2021

EXPERIENCE

Software Development Intern

C2 Labs

- Worked on a collaborative ML & NLP research creating 5 customizable end-to-end applications. Published notebooks leveraging Transformer models. My role involved working on Language Models, Semantic Role Labeling, Data Visualization, Web App Development, and deploying models using DL stacks.
- I created a suite of tools capable of serving batch requests through the API, performing in-app analysis of large sets of policy data, and generating visualizations for data interpretation for scalable policy analysis across various applications.

California, USA

June, 2023 - August, 2023

Software Engineer

PepsiCo GBS

- Built a Machine Learning system which analyzes potato plant health using images of leaves and soil and recommends a chemical formula of pesticide based on the plant's disease
- The ML application provides the user with a dashboard to input the image of the Potato leaves, select different stages of plant growth and finally lets the user know if the plant is healthy, else chemical formula of pesticide if unhealthy. Technologies Used: Python for ML system and Data Visualization, Streamlit for Web App

Hyderabad, India

June, 2021 - August, 2022

Machine Learning Intern - Predictive Data Analytics

Innoviti Payment Solutions

- Made accurate predictions with Data Visualization techniques about future merchant trends for Innoviti
- Filtered **60 out of 850** promising merchants using Machine Learning and recommended them to the marketing team for better marketing strategies

Bangalore, India

July 2020 - December 2020

PROJECTS

Electro-Chemi-Luminescence Biosensing Android Application | *Python, Image Processing* Jan 2021 - May 2021

- Developed a handheld portable low cost android application with image processing features for ECL biosensing.
- App uses capability of phones for potentiostatic control and signal monitoring in paper-based microfluidic sensors.
- Utilized the 'USB On-The-Go' protocol, to establish seamless communication between the application and a diverse range of smartphones, ensuring widespread compatibility and accessibility.
- Overcame challenges of variable light conditions and costly hardware by leveraging ECL's dark operation and integrating the phone's camera for precise **photonic signal detection**

Deep Learning based Multimodal Imaging for various biomarker detection | *Deep Learning* Jan 2021 - May 2021

- Developed a **Deep learning** algorithm to detect various biomarkers using Images from ECL biosensing
- Integrated with the ECL biosensing android app to utilize the ECL intensity analyzed images
- Used **Image Data Augmentation** techniques for datasets with less accuracy/ throughput
- This Deep Learning system was deployed to cater multimodal data and helps immensely in medical imaging

Multi-Object Detection for Self Driving Cars | *Python, Computer Vision, OpenCV*

Jan 2021 - May 2021

- Developed a Multi-object detection system for self driving cars
- The system detects lanes, vehicles, pedestrians, traffic lights and obstacles based on Computer Vision techniques
- Technologies used: Python, OpenCV

Medical Expert System | *Python, AI*

Jan 2020 - May 2020

- Developed a medical expert system that helps diagnose the diseases and prescribe appropriate medication
- Technologies used: Python experta (based on Knowledge graphs in AI)
- Enables users to get diagnosed by staying home during the outbreak of Covid-19 pandemic

Aletheia - Hindi Fake News Detection System | *Python, NLP* Jan 2021 -May 2021

- A web application for Fake news detection in Hindi language based on Natural Language Processing(NLP)
- Curated a dataset of 15000 fake and authentic news articles
- Classification can be done on 7 different ML models using 2 feature extraction methods)

Electives Recommendation ChatBot | *Flutter, AI Markup Language, Python* Jan 2020 -May 2020

- Developed a chat bot application for assisting students in choosing elective subjects
- Implemented using keyword matching and intent recognition
- Technologies used: Flask framework, Artificial Intelligence Markup language (AIML),Python

MovieLand - The Movie Information Website | *React JS* Jan 2021 -May 2021

- MovieLand is a Movie information website, built using React library
- MovieLand has movie search feature, provides information about movies and many other functionalities

Serverless Web Application | *HTML,CSS,JS, AWS* Jan 2021 -May 2021

- Developed a serverless web application using HTML,CSS, Javascript, AWS lambda, AWS Amplify, Amazon API Gateway, Amazon DynamoDB and Amazon Cognito

Foundo - The Job Portal | *Java-Spring Boot, React, MongoDB* Jan 2021 -May 2021

- Foundo - The Job finding portal, developed using Spring Boot Backend, React frontend, AWS Cloud and MongoDB Nosql database, allows users to either find or post job openings
- Foundo has keyword search feature to find jobs implemented using MongoDB Atlas and MongoDB Compass

Android Food Delivery Application | *Java, Firebase, Google Maps SDK* Feb 2020 - May 2020

- Developed an android application for point to point package delivery (compact for both customer and driver communities)

Encoder and Decoder for Golay Codes | *Vivado, MATLAB, Verilog, C, FPGA* Jan 2020 - May 2020

- Implemented an optimized software and hardware implementation of encoder and decoder for Golay codes
- Our implementation showed better performance than the benchmark, utilising lesser LUTs
- Technologies used: Vivado CAD tool, MATLAB and verilog and C programming for the software and FPGA for the hardware

Optimized Micro strip Low pass filter design | *AWR, AUTOCAD* Sep 2019 - Nov 2019

- Designed an optimized microstrip low pass filter with sharp skirt performance, wide stop band using hairpin resonator and long straight slots. Technologies used: AWR, AUTOCAD software for design, MEMS for fabrication
- Our implementation showed better performance than the benchmark in terms of optimized area of the microstrip
- Technologies used: AWR, AUTOCAD software for design, MEMS for fabrication

TECHNICAL SKILLS

Languages: C, C++, Python, Java | **Developer Tools:** Git | **Frameworks:** ML, Springboot, Django, React

PUBLICATIONS

- **Akash, B. S.**, Jathin Badam, K. V. L. N. Raju, and Dipanjan Chakraborty. "A Poster on Learnings from an Attempt to Build an NLP-based Fake News Classification system for Hindi." In ACM SIGCAS Conference on Computing and Sustainable Societies, pp. 397-401. 2021.
- Badam J, **Akash Bonagiri**, KvlN Raju, and Dipanjan Chakraborty. "Aletheia: A Fake News Detection System for Hindi." In 5th Joint International Conference on Data Science & Management of Data (9th ACM IKDD CODS and 27th COMAD), pp. 255-259. 2022.