AYUSHI BANSAL

Davis, CA 95616

Contact: +1(530)-761-6957
Email: ayubansal@ucdavis.edu

https://www.linkedin.com/in/ayushi-bansal-bab362a6/
https://ayushi007.github.io/

EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS **California**
- *Master's in Computer Science (GPA: 4.0/4.0)* **Fall 2018- March 2020(Expected)**
- Coursework: Operating Systems, Analysis of Algorithm, Machine Learning, Artificial Intelligence, Computer Architecture
- Graduate Teaching Assistant for CHE2A and ECS 20 (Discrete Math for CS)

INDIAN INSTITUTE OF TECHNOLOGY (IIT-BHU), VARANASI **India**
- *Bachelor of Technology in Electrical Engineering (GPA: 9.17/10.0)* **July 2014– May 2018**
- Coursework: Computer Programming, Mathematical Modelling, Operations Research, Macroeconomics, Probability and Statistics
- Undergraduate Teaching Assistant for CSO-101, Computer Programming (Data Structures and Algorithms)

SKILLS

- **Programming Languages**: C, C++, Python, Java, Shell Scripting, Verilog, SQL, HTML
- **Technologies**: AWS, Arduino, Git, MATLAB, JUnit, PHP, Tableau, TensorFlow, Eclipse, InteliiJ, Guice
- **Interests**: Data Structures, Algorithms, Database management, Analytics, Solving puzzles

WORK EXPERIENCE

AMAZON.COM INC, United States Software Development Engineer Intern **June - September 2019**
- Worked as part of Amazon's Paid Search team that is responsible for Amazon's Paid Ads (text ads and shopping ads) on Search Engines like Google and Bing.
- Design and implemented a Data Subject Access Request (DSAR) Response Handler End-to-end Service used for Paid Search interaction with another Amazon internal team.
- Service gives back the data that Paid Search holds of a user who is requesting to retrieve it as a part of GDPR rule.
- **Exposure**: Java, SQS, DynamoDB, EMR, EDX, JUnit and Guice Dependency Injection

MENTOR GRAPHICS LIMITED, INDIA Software Development Intern **May - July 2017**
- Worked as part of CDC (Clock Domain Crossing) team of company, for development of lint tool for HDLs (Hardware Description Languages) to check for potential mismatch towards simulation and synthesis
- Added 20 checks in the lint tool and for each check, programmed around 10 test cases in Verilog/System Verilog to test the lint tool
- My contribution directly benefited the company and helped them meet the deadline for development of tool
- **Exposure**: C/C++, GDB (GNU Debugger), Shell Scripting, LINUX, Verilog/System Verilog

PROJECTS

Implement Inconsistency in deception as a defense *Systems and Security, Ongoing*
- Explored the nature and possibility of use of inconsistency in the deception for defense mechanism in computer security.
- Determined the various paths to access kernel in Linux System by attacker and determining the ways to incorporate the deception of inconsistent behavior in the system.

Peer-to-Peer File Backup System *Operating Systems, 2019*
- Implementing a distributed P2P file storage and Backup System focusing on reliability (avoiding churning) and high bandwidth operation.
- Erasure coding is used as File redundancy scheme and AES encryption for data security.

Fake review Detection *Machine Learning, 2019*
- Trained a model on Yelp review data set to identify fake reviews using various techniques like Doc2Vec, FastText and LSTM and compared the results in different scenarios.

Design *Visualizations* *Information Visualization, 2019*
- Designed Chloropleth Map, TreeMap and Dotted Map Visualizations. Designed Zoomable TreeMap using D3 and jQuery.
- **Exposure:** Tableau, HTML, Javascript, CSS, D3, jQuery

Product Classification and Price Prediction *Artificial Intelligence, 2018*
- Trained Faster-RCNN on base network of VGG-16 and Inception Resnet V2 that will allow user to identify multiple objects along with their prices in the input image. Product-price dataset is generated using Amazon's database and Open Images Dataset V4 is used for images
- **Exposure:** Deep Learning, Neural Networks, TensorFlow, Keras, Google Colaboratory

Tuning of PID and fractional PID Controllers *Control Systems, 2017*
- Tuned PID controller for Inverted Pendulum on Cart model and tuned fractional PID using Ziegler–Nichols-type rules on MATLAB.
- **Exposure:** Fractional calculus, Fractional PID, Robotics, MATLAB/SIMULINK

Web-Based Library Management System *DBMS, 2017*
- Built a web-based application for controlling and monitoring the transactions in the library. **Exposure**: PHP, MySQL