# Vivek Kaushal

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Education IIIT, Hyderabad 2016-2021

B.TECH WITH MS IN COMPUTER SCIENCE AND ENGINEERING

CGPA: 7.96 | Merit List for Academic Excellence, 2019 | Dean's List for Research, 2018

Experience National Taiwan University, Taipei

May, 2019 - July, 2019

**RESEARCH ASSISTANT - BIG DATA ANALYSIS** 

Worked under Professor Hendrik Rommeswinkel on a study to assess consumers' freedom of choice in US markets using a large database of transactions across years of consumer expenditure. I devised and coded a large number of statistical models in R for big data analysis on the mentioned database.

Cognitive Sciences Lab, IIIT-H

August, 2017 - Present

UNDERGRADUATE RESEARCHER

Working in the field of Finacial Risk Taking and Human Computer Interaction under Dr. Kavita Vemuri. Presented work at multiple conferences -- listed below. Currently working on the integration of

low income rural Indian families into the organised banking sector through technology-based solutions. January, 2018 - February, 2019

INFORMATION RESEARCH INTERN

Worked closely with T-Hub start-ups to write papers on topics in technology for in-house circulation and publication. Topics centered around domain specific market opportunities and data analysis.

DreamVu Inc. August, 2019 - Present

MARKET RESEARCH INTERN

Worked on strategies for market entry and disruption in the robotics and computer vision industry. Reported directly to the COO and CEO with research insights and gauged market synergies.

**IIIT Hvderabad TEACHING ASSISTANT** 

T-Hub

Accepted as a Teaching Assistant for the courses: Structured System Analysis and Design under Dr.Raghu Reddy for Monsoon, 2018, and Engineering Systems under Dr. KS Rajan for Spring, 2019. Workload involved teaching students, designing and grading assignments while also mentoring projects.

Wowsome January, 2017 - April, 2017

AUGMENTED REALITY INTERN

Worked with Vuforia in Unity3D for production scale Augmented Reality Applications. Built the platform from scratch in C# using Unity3D with backend integration to AWS. Two distinct projects: Sentinel - An AR based ticket checker; Interactive Wall - an innovative AR based advertising platform.

Entrepreneurship Cell, IIIT-H

August, 2016 - April, 2019

August, 2018 - April, 2019

**OVERALL HEAD** 

Structured and curated a multi-tiered team of 30+ individuals. Launched multiple initiatives and established long-term collaborations with corporate institutions. Headed India's largest student-organized hackathon - Megathon, ensured exponential growth, established a well-respected brand in three years.

Research Work Foundation of Utility and Risk Conference June, 2018

UNIVERSITY OF YORK, YORK, UK

Poster presented on a pilot study of risk propensity and academic performance using a choice simulator.

Sixth Annual Conference of the Association for Cognitive Sciences in India

December, 2019

BITS PILANI GOA CAMPUS, GOA, INDIA

Paper accepted on "Investigating Academic Performance and Financial Risk-Taking" -- poster presented. DOI: 10.13140/RG.2.2.19873.56160

**Major Projects** 

## **Consumer Freedom Measure**

BIG DATA ANALYSIS USING R

Assisted the development of a data analysis codebase in R to draw inferences on a large-scale consumer behavior database that tracked 60,000+ US families' expenditure on goods over a period of 14 years. Besides development on the codebase, studied practical trends in data sciences and applied statistics.

#### Financial Risk Behaviour Assessment

2018

2019

BEHAVIOURAL ECONOMICS I COGNITIVE SCIENCE

A web-based application was coded in native JavaScript for a comparative study of financial risk intelligence and academic performance. The application simulated real world choices and recorded responses in a game-like environment. Data collected was analysed and the results are under publication.

#### **Click-bait and Advertisements**

2019

**HUMAN COMPUTER INTERACTION** 

Working with Dr. Prithwiraj Mukherjee, IIM Bangalore, on a study of user interaction with ads on clickbait articles. Tobii x120 eye-tracker and R used for experimentation and data analysis respectively. Handling experimentation and data analysis, with active contribution in experiment design.

### **Bowling Management System**

2019

**USABILITY ENGINEERING | JAVA** 

Engineered usability into a large JAVA codebase to manage a bowling alley. Feature enhancement, user-focused changes, qualitative and score-based refactoring of the codebase was implemented. The project was taken up in a team of 3 for the Software Engineering coursework at IIIT Hyderabad.

Interactive Wall 2017

AUGMENTED REALITY BASED ADVERTISING

A standalone advertising platform was built for interactive real-world advertising. Support for android and iOS based devices was provided for interactive advertising using visual data-points parsed by Vuforia engine in Unity3D. Presently used by 20+ consumer focused companies.

Terminal Shell 2017

C/C++ BASED DEVELOPMENT

A custom terminal shell was coded in C++ based on the POSIX architecture with integrated syscalls. All common shell commands were had native support with syscalls used for less commonly used commands. An in-depth understanding of computer system architecture was gained in the process.

**Custom SOL Engine** 2018

PYTHON BASED DEVELOPMENT

A custom SQL Engine was coded in Python to replicate the functionality of MySQL with support for complex data queries, completed for course requirements of Database Systems under Dr. PK Reddy.

Day to Day: Python, JavaScript, Shell, Git, Tensorflow - Keras, Dart - Flutter

Familiar: R, MySQL, MATLAB, C/C++, C#, Java, Django, CSS, Unity3D, React

Operating Systems: OS X, Linux, Windows

**Relevant Courses** Research: Artificial Intelligence | Research Methodologies | Game Design | Cognitive Neuroscience

> Systems: Database Systems | Software Engineering | Compilers | Statistical Methods in Al Foundation: Data Structures | Structured System Analysis and Design | Engineering Systems

2019 Achievements Merit List for Academic Excellence, IIIT Hyderabad

> Dean's List for Research, IIIT Hyderabad 2018 99.94 Percentile in JEE (Rank 992) 2016 National Talent Search Scholarship, Government of India 2015

Overall Head at Entrepreneurship Cell, IIIT-H 2017-2019

2018-2019 Teaching Assistant, IIIT-H Member of Student Parliament, IIIT-H 2016-2018 Lead Organizer at Megathon 2017, 2018 Coordinator, Music Club IIIT-H 2016-2017 School Captain 2015-2016

Skills

Positions Held