# Keerti Anand

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**EDUCATION**

**Duke University**, Durham NC **[Aug '17 - May '22]**
*PhD*, Computer Sciences: Algorithms/Machine Learning
CGPA: 3.9/4.0

**Indian Institute of Technology(IIT) Kanpur** **[July '13 - Dec '16]**
*Bachelor of Technology (BTech)*, Computer Science and Engineering
CPI: 9.3/10.0

**INTERESTS**

• Optimization • Prediction Modelling • Algorithm Design • Machine Learning • AI

**ACADEMIC HONORS**

• Common Admission Test (CAT) 99.94 percentile (2017)
• All India Rank 209 in Joint Entrance Examination (IIT JEE) (2013)
• Indian National Physics Olympiad (2012)
• KVPY Fellowship (2012)
• National Talent Search Scholarship (2009)

**WORK EXPERIENCE**

**Summer Intern: Aarohan Holdings and Advisors, India** **[Summer '18]**
• Forecasting various Equity/Bond Market Indices using Fb Prophet/ARIMA
• Designed a Risk Management Dashboard in Python to better inform the Firm's clients

**Visiting Researcher: Tel Aviv University, Israel** **[Spring '17]**
• Worked on developing new drug targets for Neuro-degenerative ailments like Alzheimer's and Huntington's Disease
• Modelled the drug targets as nodes in Protein-Protein Interaction(PPI) Networks, using Network Propagation Algorithms to find suitable sites

**Summer Intern: Goldman Sachs, India** **[Summer '16]**
• Worked in the Securities Division Strats Team on the Risk-incorporated pricing for Exotic Derivatives and implemented the new pricing model in Slang
• Involved learning Stochastic Calculus and modelling risk via Hazard Models

**SELECTED PUBLICATIONS**

• **Customizing ML Predictions for Online Algorithms** [**ICML'20**]
• **A Regression Approach to Learning-Augmented Online Algorithms** [**NeurIPS'21**]

**SELECTED PROJECTS**

• **Decision Making at Scale**: Analysis of scalable service allocation strategies for low-latency mobile communications with an emphasis on fairness
• **Compiler Design**: Designing an end-to-end Python to MIPS compiler
• **Visual Odometry**: Determining the configuration of a 2-DOF robotic arm from captured Images using techniques such as Isomap, kNN and PCA
• **Prediction Models**: Using ensemble methods such as Random Forests, and SVM in predicting the cost of AirBNB rentals in the city of Buenos Aires
• **Big Data**: Handling massive amounts of order-flow and trade book data; creating suitable features to predict future market volatility

**RELEVANT COURSES**

• **Computer Science**: Approximation Algorithms, Compiler Design, Data Structures, Randomized Algorithms, Operating Systems, Machine Learning, Deep Learning
• **Applied Mathematics**: Linear Algebra, Probability and Statistics, Discrete Mathematics, Computational Economics, Chaos Theory, Financial Derivatives

**TECHNICAL SKILLS**

**Programming Languages :** Python, C++, C, Bash, AWK
**Software/Utilities :** MATLAB, Git, Verilog, LaTeX, Vim, SQL, Tensorflow, Pandas

**OTHER ACTIVITIES**

• Reviewer for ICML 2021, and NeurIPS 2021
• Algorithmic Trading: Developing trading strategies at Quantopian
• Poker: Finished in the money during University level Poker Tournaments
• Community Service for NSS, India
• Academic Mentor, Duke Athletics: Mentoring/Tutoring student-athletes at Duke