

# Kandarp Khandwala

Baltimore, MD | kck@jhu.edu | +1 (443) 763-9251 | Github: kandarpck  
Website: kandarpck.appspot.com | LinkedIn: linkedin.com/in/kandarpkhandwala

## EDUCATION

- Masters in Computer Science & Security | Johns Hopkins University** Aug. 17 - Dec. 18  
· Natural Language Processing, Advanced Cryptographic Systems, Blockchains and Cryptocurrencies. GPA: 3.81
- Bachelors in Computer Engineering | Mumbai University** Jul. 11 - May. 15  
· Algorithms, Operating Systems, Data Mining, Advanced Computer Networks, Artificial Intelligence. GPA: 3.61

## EXPERIENCE

- Software Engineering Intern | Verizon** May. 18 - Aug. 18  
· **Drive Cleaner:** Developed the API Backend Microservice to calculate a score based on driving habits and car conditions. Provided tips to improve the score which helped the user in fuel and environmental savings.
- Research Assistant | Institute of Data Intensive Engineering and Science** Aug. 17 - May. 18  
· **Deep Learning:** Analyzed raw galaxy images, identified and accurately predicted the type of galaxy observed. Generated a realistic simulated universe and performed predictive analysis on the simulated data.
- Software Engineer | JPMorgan Chase & Co.** Jul. 15 - Jun. 17  
· **DevOps:** Lead the DevOps initiative in the team by bringing the support team up to speed using knowledge transfer sessions. Identified pain points and built a dashboard tool unifying applications which increased productivity by 20%  
· **Secured Lending:** Interacted with traders and orchestrated the development of a comprehensive suite of five applications for high-value Lending and Collateral transactions, shortening the turnaround time from days to minutes.
- Summer Intern | Avocation Education Services Pvt. Ltd.** May. 15 - Jul. 15  
· **Security and Optimization:** Enhanced Web Security by adding API authentication, HTTPS, closing down on unrestricted ports, adding measures to protect against DDoS attacks and implementing Identity & Access Management.

## PROGRAMMING SKILLS

Python, Pandas, Django, Java, Spring, Android, Go, Unix, Microservices, TensorFlow, Snort, AWS, GCP, Solr, Git, SQL,  $\LaTeX$

## PROJECTS AND PUBLICATIONS

- Decentralized Public Key Infrastructure using Ethereum Smart Contracts** Jan. 18 - May. 18  
· Developed a PKI with built-in certificate transparency to make it easy to detect rogue certificates for fine-grained identity management and trust.
- Mini Projects** Sep. 17 - May. 18  
· Simulate an attack on Bitcoin by developing a Miner with 51% hash power to maximize profits.  
· Cryptographic Protocol Analysis of the Telegram encryption protocols.  
· Implemented the Vigenere, AES, RSA and Rabin Cryptosystems and launched Timing & Padding Oracle attacks against them.  
· Thorough Analysis, Reporting of the top 10 OWASP vulnerabilities and demonstrating attacks and defenses against them.
- Personalized Search Engine and Mobile Assistant** Aug. 14 - Mar. 15  
· Programmed a small-scale search engine by extending Apache Solr, delivering high quality, efficient search results and context aware customized information based on the user's current likes and likelihood of future preferences.
- Dynamic Context Aware Traffic System Optimization** Jan. 14 - May. 14  
· Proposed algorithmic changes after statistical analyses on vehicular traffic data leading to 15% traffic efficiency improvement.  
· Nominated as the best departmental project. Picked among top ten ideas from 600 national entries at 'All India Science and Engineering' Contest organized by KPIT.  
· The findings for this research were published in IJERT. arXiv:1407.5212 (2014). doi: 10.5120/17586-8253 Aug. 14
- Real Time Road Bump Data Analysis using Big Query** Jun. 14 - Jul. 14  
· Created a continuous data pipeline processor that managed the entire ETL process on streaming Road Bump data collected using mobile sensors delivering an optimized route to transport cheaply.

## HONORS AND AWARDS

- **Holiday Hack Challenge:** Reached stage 4/5 of the Network Security yearly challenge. Dec. 16  
· **Top Thinker:** Award for the 6 most impactful employees among 150 analysts joining JPMorgan. Jul. 15  
· **Hackathon - 1st Prize, JPMorgan:** Among 120 competitors selected from 20 colleges. Jul. 14  
· **Hackathon - 2nd Prize, Google Developers Group:** World Hackathon among 30 participating teams. Oct. 14  
· **State Govt. Academic Scholarship:** Funding 1 year of education for excellence in the field of Computer Sci. Jun. 11

## LEADERSHIP AND INVOLVEMENT

- Campus Ambassador, Technical Judge and SME | JPMorgan** Oct. 15 - Nov. 16  
· Provided subject matter expertise and conducted training sessions on Git, Android, and AWS for 500 students.
- Event Planner and Technical Lead | Indian Society for Technical Education** Jul. 12 - Jul. 14  
· Incharge of the Mobile and Web strategy. Built games like Virtual Stock Market Trading which garnered 20000 hits.