Kandarp Khandwala

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EDUCATION

Masters in Computer Science & Security | Johns Hopkins University
Aug. 17 - Dec. 18
· Network Security, 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

Teaching Assistant | Practical Cryptographic System
Aug. 18 - Dec. 18
· **Head TA:** Assisted Prof. Matthew Green by conducting bi-weekly office hours for 70 students in addition to holding review sessions, assisting with projects, creating rubrics and grading assignments.

Software Engineering Intern | Verizon
May. 18 - Aug. 18
· **Clean and Safe Driving:** Increased user engagement by 5% by developing the API Backend Microservice to calculate a Safety and Green score based on driving habits and car conditions using metrics like Acceleration, Braking, Speed and Location data.
· **Google Assistant Integration:** Build a Microservice to enable the user to interact with the Google Assistant ecosystem and ask questions about the status, metrics and current details about his connected car.

Research Assistant | Institute of Data Intensive Engineering and Science
Aug. 17 - May. 18
· **Parallel Data Access:** Improved data querying and operations by 20x using parallel access of terabytes of galaxy data using dynamic task scheduling optimized for computation.

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.

PROGRAMMING SKILLS

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

PROJECTS AND PUBLICATIONS

Publicly Verifiable Proof of Data Deletion
Aug. 18 - Dec. 18
· Building a mechanism to provide a public proof of secure data deletion by encrypting data and storing the keys in a trusted platform module (TPM) like Intel SGX.

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.
· 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 continous 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

· **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.