Robert Morck

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Education

Princeton University, Princeton, NJ — September 2017 – May 2021
- Bachelor of Science in Engineering (B.S.E) in Computer Science - 3.94/4.0 GPA
- Minor: Statistics and Machine Learning
- Honors: Magna Cum Laud, Tau Beta Pi, Phi Beta Kappa

Experience

Software Engineer, MongoDB — August 2021 – Present
- Rotated as a software engineer on the Query Execution and Atlas Data Lake teams, developing in Go and C++
- Introduced new cloud storage provider offering into query federation engine, leading the design for authentication and developing new interfaces to integrate with cloud provider APIs
- Improved testing suites latency by 25% through introducing parallelism and multi-tenancy
- Developed command line tools to monitor data ingestion service and export archived data to cloud storage providers
- Built multiple aggregation operators within MongoDB's new Slot-Based Execution query engine

Product Management Intern, Legion Health - Y Combinator S21 — June 2021 – August 2021
- Legion Health provides a solution for staffing and scheduling clinicians with telehealth companies
- Launched and developed specifications for scheduling platform within the clinician portal to be used by all activated clinicians

Software Engineering Intern, MongoDB — June 2020 – August 2020
- Developed full stack in React.js, Typescript, Redux, Java and MongoDB on the Cloud Core Billings and Integrations team
- Implemented new Value-Added Tax (VAT) system to interface with a new VAT service to be used by all international users of the MongoDB Cloud products
- Redesigned invoice summaries on MongoDB Cloud Billings page, organizing products by top level services

Software Engineering Intern, ServiceNow — May 2019 – August 2019
- Developed back-end in Java and MySQL on the Platform Security team
- Built new methods for searching on encrypted data where prefix and infix searches can be performed on encrypted databases.
- Developed new REST API endpoints to allow clients to leverage encrypted searching.

Activities and Leadership

Tigers In Product, Founder/Director, Princeton Entrepreneurship Club (tigersinproduct.org) — June 2020 – May 2021
- Lead Princeton E-Club team of 9 students that connects undergraduates with startups for hands-on experience in areas of product management, business development, software engineering, and UI/UX Design.
- Launched two project cycles in fall 2020 / spring 2021 with 3 and 7 startups each, resulting in 14 student interns
- Hosted skill-building workshops with product leaders from companies such as Apple

Rehack, Princeton Entrepreneurship Club — September 2018 – March 2020
- Tech Lead (September 2018 - June 2019) - Organizing first collegiate reverse Hackathon, focusing primarily on UI/UX. Developed website with director (Rehack.co)
- Experience Lead (September 2019 - March 2020) - Led team of 5 and organized operations and outreach

Computer Science Lab TA — September 2019 – April 2020
- Lab TA for COS 226 and 217: Data Structures and Algorithms and Introduction to Programming Systems.
- Helped students debug programming assignments and guided them to a solution

Projects

TigerTravel (Currently hosted at tiger-travel.herokuapp.com) — March 2019 – May 2019
- Web-based application Princeton students use to form groups for ride-sharing applications based on overlapping time-intervals, each group page features built-in chat communication.
- Used Python, Django, Javascript, Bootstrap, HTML/CSS, PostgreSQL, hosted on Heroku

Deep RL Applied to Multi-Agent Traffic Control — February 2020 – May 2020
- Adviser: Prof. Karthik Narasimhan
- Created suite of traffic environments and trained reinforcement learning agents to successfully eliminate traffic using Deep Q-Networks and Proximal Policy Optimization algorithms
- Used Python, PyGame, RLLib, OpenAI Gym, TensorFlow, Keras

Skills

Programming
- Java, Python, C++, Javascript, Typescript, Node.js, React.js, Redux, Express, MySQL, MongoDB, Go, Docker, gRPC

Coursework
- Linear Algebra, Multivariable Calculus, Data Structures and Algorithms, Systems Programming, Information Security, Fundamentals of Statistics, Discrete Math, Data Science, Machine Learning, Mathematics for Machine Learning, Reinforcement Learning, Economics and Computation, Computer Processor Design, Computer Networks, Computer Vision, Optimization