# Maximillian Dumas

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## EDUCATION

### CORNELL UNIVERSITY

MSc in Applied Information Science
MSc in Information Systems with a Concentration in Urban Tech
Certificate of Accomplishment in Computer Science
Expected May 2023 | New York, NY

### NEW YORK UNIVERSITY

BA in Mathematics and Computer Science
Dec 2015 | New York, NY

## LINKS

Website: **dumas.nyc**
Github: **maxdumas**
LinkedIn: **maximilliandumas**

## COURSEWORK

### GRADUATE (YEAR 1)

Applied Machine Learning
Deep Learning
Blockchain & Cryptocurrencies
Urban Systems
Data Science in the Wild
Smart Cities

### UNDERGRADUATE

Computer Graphics
Operating Systems
Optimization Methods
Algorithms
Virtual Reality

## SKILLS

### PROGRAMMING

Advanced:
TypeScript • Python • Shell • Java/Scala • Swift • CSS
Proficient:
C • C++ • C# • SQL • LaTeX
Technologies:
Full-stack • AWS • Docker • iOS • Android • SQL • React

## INTERESTS

Blockchain • Micro-mobility • Autonomous Vehicles • Graphics • Computer Vision • Smart Cities

## EXPERIENCE

### AMAZON | Software Dev Engineer, Core ML

Sep 2017 - Jun 2021 | New York, NY

- Acted as the tech lead and founding member on three separate teams of as many as seven engineers, being heavily involved in project planning, problem definition, team management, and the establishment of engineering culture while acting as an individual contributor. Teams were involved in delivering SVP-level goals for Amazon.
- Implemented from the ground-up native and React Native iOS/Android applications and numerous full-stack web applications driven by React and Vue.js frontends with Node and Python backends.
- Worked closely with machine learning scientists to create image-based cloud-native data pipelines able to scale to millions of images, allowing a small science team to dramatically scale up its inference and training capabilities.
- Deployed a number of computationally intensive machine learning algorithms into production environments designed to grow to meet the needs of Amazonian scale.
- Worked closely with embedded systems in state-of-the art 3D photogrammetry scanners to debug precision issues.
- Developed and implemented novel project estimation strategies that helped deliver projects to leadership on-time with high levels of transparency.

### BODY LABS | Intern + Software Engineer

Sep 2016 – Sep 2017 | New York, NY

- Implemented 3 products from the ground up.
- Implemented web frontends in React using CSS3 and modern build tooling such as WebPack and PostCSS. Built mobile frontends built using Swift or React Native.
- Implemented backends using Node and MongoDB, with distributed processing architecture delegating tasks using RabbitMQ to Python workers running on custom EC2 instances.
- Managed technical requirements for a team of as many as 6 people. Estimated task requirements and created technical roadmaps.
- Worked extensively with proprietary 3D mesh measurement code and computer vision algorithms.

### YODLE | Software Engineer Intern

May 2016 – Sep 2016 | New York, NY

- Developed within a JVM micro-service ecosystem using Mesos, Docker, and Marathon, with Kafka for message passing and chronos for scheduling.
- Learned and utilized test-driven design principles in architecting new features.

## RESEARCH

### CORNELL TECH URBAN TECH HUB | Researcher

Sep 2021 – Present | New York, NY

Working with **Michael Samuelian** and **Dr. Anthony Townsend** on a variety of research projects. An example project is building a tool for visualizing LIDAR data of New York City trees paired with structured information about those trees.

### NYU MEDIA RESEARCH LAB | Researcher

Mar 2015 - Dec 2015 | Ithaca, NY

Implemented virtual reality experiences with **Sebastian Herscher** under **Ken Perlin** for submission to SIGGRAPH 2015, including games and platform techniques.