

Biography: Nicholas André G. Johnson



A native of Gaspé, Quebec, Nicholas Johnson grew up in Montreal, Canada, where he attended Selwyn House School from Kindergarten to Grade 11, graduating in 2015 as Valedictorian and recipient of the Governor General's Bronze Medal, Lucas Memorial Medal, Veritas Diploma and academic awards in Physics, Chemistry, Français Plus, Calculus and *le Prix du Mérite en histoire du Québec*. The recipient of the Marianopolis Millennium Scholarship, Marianopolis Entrance

Scholarship and Director General Awards, Johnson studied Honours Health Sciences for one year at Marianopolis College before entering Princeton University in Fall 2016. He graduated in May 2020 with the Bachelor of Engineering Science (B.S.E.) degree with Concentration in Operations Research and Financial Engineering and Minors in Computer Science, Statistics and Machine Learning, and Applied and Computational Mathematics. He is the Valedictorian of Princeton's Class of 2020 and the first Black Valedictorian in Princeton's history. He is recipient of the James Hayes-Edgar Palmer Prize in Engineering - awarded to the member of the senior class who demonstrated excellent scholarship, capacity for leadership and promise of creative achievement in engineering.

Johnson is currently a Ph.D. Candidate in Operations Research at the Massachusetts Institute of Technology where his core research focuses on developing a more unified theory of optimization and machine learning with a particular interest in applied problems in the healthcare space. He also has research interests in sequential decision making under uncertainty and the ethics of algorithmic decision-making systems. His undergraduate thesis focused on developing high performance, efficient algorithms to solve a network-based optimization problem that models a community based preventative health intervention designed to curb the prevalence of obesity. During his Junior Year, Nicholas developed a machine learning system to more robustly anonymize datasets than existing alternatives. He previously interned at Oxford University's Integrative Computational Biology and Machine Learning Group, developing a novel optimization technique, for which his work was recognized with the Angela E. Grant Poster Award for Best Modeling at the 25th Conference of African American Researchers in the Mathematical Sciences in June 2019.

Among his other academic honours, Johnson is a recipient of the Class of 1883 English Prize for Freshmen in the School of Engineering, a two-time recipient of the Shapiro Prize for Academic Excellence and co-recipient of the Class of 1939 Princeton Scholar Award. He was elected to Phi Beta Kappa in the Fall of 2019 and to Tau Beta Pi in 2018, for which he served as President of the Princeton Chapter in 2019. He is a member of the Princeton chapter of Engineers Without Borders and served as its Co-President in 2018. He has served as a Writing Fellow at Princeton's Writing Center, Editor of *Tortoise - A Journal of Writing Pedagogy*, Features Editor for Princeton's *Public Health Review*, Tour Guide for the School of Engineering; and Residential

College Advisor at Whitman College. He also participated in Whitman College's exchange program with the Chinese University of Hong Kong in March 2017.

Nicholas worked as a Machine Learning Engineer at Google's California Headquarters in the Summer of 2019 and previously interned at the Montreal Institute for Learning Algorithms (MILA), under the supervision of Dr. Jason Jo and Professor Yoshua Bengio. During the Summer of 2020, he interned as a Quantitative Researcher and Software Developer at the D. E. Shaw Group. His hobbies include running, basketball, chess and reading.