CHRISTOPHER BARKACHI

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Education

Princeton University   **September 2011 – June 2022**

B.S.E. in Computer Science   Departmental GPA: 4.00
Certificate in Statistics and Machine Learning   Overall GPA: 3.94
Relevant Coursework: Algorithms and Data Structures, Systems Programming, Probability and Stochastic Systems

River Dell High School   **September 2014 – June 2018**

Valedictorian; AP Computer Science A, AP Calculus BC, AP Statistics, AP Physics C, AP French
Founder of Kachi PC (built and shipped several custom PC requests each month)
Jersey Boys State Delegate, Varsity Debate Captain, National Honor Society President, Autism Clinic Supervisor

Projects

Princeton

· *Markov*: stochastic Markov model that outputs predictive text based on a given input text and chain length
· *Seam Carving*: intelligently resizes pictures, using Dijkstra's shortest-path algorithm to excise specific "seams"
· *Avogadro*: uses Brownian model to analyze movement of particles in JPEG frames and verify Avogadro's number
· *Burrows-Wheeler*: combines Burrow-Wheeler transform, move-to-front encoding, and Huffman compression
  to achieve 2.29 compression ratio

Work Experience

Algorithms and Data Structures Project Grader | Princeton CS Department   **September 2019 – Present**

· Invited to grade and provide detailed feedback on course project submissions, indicating room for improvement
  in syntax, logic, style, overall program readability, and data analysis

Communications and Marketing Intern | STIL Optics (Aix-en-Provence, France)   **July 2019 – August 2019**

· Communicated with French R&D engineers to learn about optical sensor offerings and create company catalog
· Built company website without prompting at stilsensors.biz, learning and using JavaScript, HTML, and CSS

College Applications Consultant | CollegeVine   **May 2018 – September 2019**

· Identified as top consultant by program manager because of ability to guide clients to produce stellar essay
  writing, helping all clients in 2018-2019 admissions cycle gain acceptance to one their top three schools

Activities and Leadership

Vice President and Founding Member | Computational Linguistics Society   **September 2019 – Present**

· Host experts on the frontiers of linguistics and machine learning and discuss noteworthy papers in the field

A Cappella Baritone Vocalist | The Princeton Tigertones   **February 2019 – Present**

· Perform with Princeton's premier all-male a cappella group, rehearsing daily to tour the country and the globe

Founder | Circuits Bonanza   **February 2019 – Present**

· Founded weekly program to expose middle school students to basic principles of electricity using breadboards
· Guided students through projects that included weather display and motion-detecting squirt gun

Skills

· Programming: (*proficient*) Java, C, R, MATLAB, Mathematica, Python, HTML (*basic*) JavaScript, CSS
· Foreign Language: professional working French, limited working Arabic