Sanjit Bhat | Curriculum Vitae

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Education

Acton-Boxborough Regional High School — **Acton, MA**
Weighted GPA: 4.4/5.0, Unweighted GPA: 3.9/4.0 — *Fall 15–Present*
- 2018–19 AP Courses: Statistics, Chemistry, English Literature, Spanish Language, Psychology
- ACT Composite (34/36); SAT Subject Tests: Math II (800/800), Biology E (790/800)
- Completed APs: BC Calculus (5/5), Computer Science A (5/5), Physics C: Mechanics (5/5), U.S. History (5/5)

Harvard University Extension School — **Cambridge, MA**
Multivariable Calculus (Earned 'A' Grade), Linear Algebra (In Progress) — *Fall 18–Spring 19*

AlphaStar Academy — **Santa Clara, CA**
USA Computing Olympiad (USACO) Silver, Gold, and Platinum courses — *Summer 16–Summer 17*
Computational geometry, data structures, search techniques, graph algorithms, and dynamic programming

Extra-Curricular Activities

MIT Program for Research in Math, Engineering, and Science (PRIMES) — **Cambridge, MA**
Third-year student in highly-selective, year-long high school research program — *Jan 17–Present*
- Project 1: Attacking and defending users' anonymity on Tor Network (Jan 2017–Aug 2018)
  - Research at the intersection of secure communication and applied deep learning (self-studied via Fast.ai)
  - Semifinalist in prestigious 2017 Siemens Competition for high school research
  - Presented at MAA Undergraduate Student Poster Session of 2018 Joint Mathematics Meeting, San Diego
  - First-author of paper under review at 2019 Privacy Enhancing Technologies Symposium conference
  - Second-author of paper accepted into 2018 ACM Workshop on Privacy in the Electronic Society
- Project 2: Adversarial machine learning—Mądry Lab, MIT (Jan 2018–Present)
  - Research includes techniques from linear algebra, theoretical machine learning, and convex optimization
  - National Scholar in 2019 Regeneron Science Talent Search Competition with paper on efficient robust ML

AB IdeaLab (AB's Computer Science Club)
Co-Captain (Fall 17–Present) — *Fall 15–Present*
- Plan team meetings, write teaching material, and assist members with creating and executing original projects
- Train competitive programming team—ranked #1 nationally in 2018–19 ACSL contest
- Planned and executed Major League Hacking local hack day (AB's Hackathon) in Dec 2017

ABRHS Marching and Concert Bands
Principal Tuba (Fall 17–Present) — *Fall 15–Present*
- 3rd chair concert band tuba player at 2018 and 2019 MMEA Eastern District Senior Festivals
- AB marching band received gold medal at 2017 and 2018 state-level MICCA competition

Boy Scouts of America, Troop 284 — **Acton, MA**
Eagle Scout (Earned Sep 16) — *April 12–Present*
- Achieved highest rank in Boy Scouts. Led project to paint local TV studio sets and enhance production value
- As Senior Patrol Leader, planned troop meetings and events and was primary interface between scouts and adults

AB Science Olympiad Team
Member of 15-student team that won 1st place at Yale Invitational Tournament — *Fall 15–Spring 17*

Publications and Preprints

[1] **Sanjit Bhat**, Dimitris Tsipras, and Aleksander Mądry. Towards Efficient Methods for Training Robust Deep Neural Networks. *Under review at Regeneron Science Talent Search competition*, 2019.

[2] **Sanjit Bhat**, David Lu, Albert Kwon, and Srinivas Devadas. Var-CNN: A Data-Efficient Website Fingerprinting Attack Based on Deep Learning. *Under review at Privacy Enhancing Technologies Symposium*, 2019.

[3] David Lu, **Sanjit Bhat**, Albert Kwon, and Srinivas Devadas. DynaFlow: An Efficient Website Fingerprinting Defense Based on Dynamically-Adjusting Flows. In *Proceedings of the ACM Workshop on Privacy in the Electronic Society*, 2018.

[4] **Sanjit Bhat**, David Lu, Albert Kwon, and Srinivas Devadas. Var-CNN and DynaFlow: Improved Attacks and Defenses for Website Fingerprinting. *arXiv preprint arXiv:1802.10215*, 2018.

Honors and Awards

- **USA Computing Olympiad—Gold Level**
  Penultimate level in highly-competitive high school CS Olympiad — *Dec 16*
- **MIT Blueprint Hackathon—1st place in Rookie Division**
  Created a game that integrated visual perception, auditory cues, and motor functions — *Feb 16*
- **President's Volunteer Service Award**
  Received Gold-level in 2015, 2016 and AB community service award in 2017, 2018 — *Jan 15–Dec 18*
- **National Honor Society**
  Member of Raymond J. Grey chapter — *Spring 18–Present*

Work Experience

- **KTByte Computer Science Academy—Teaching Assistant** — **Lexington, MA**
  Assisted students with introductory–mid level CS using Java and Processing — *July 15–Jan 17*

Community Service

- **Peer Tutor** — **Acton, MA**
  Help high school students develop strong understanding across several subject areas — *Fall 17–Present*
- **Central MA Regional Student Advisory Council—Regional Delegate** — **Hudson, MA**
  Elected into committee that discussed solutions to pertinent educational issues — *Fall 16–Spring 18*
- **Science Discovery Museum—Volunteer** — **Acton, MA**
  Helped young children explore science through hands-on exhibits — *July 15–May 17*

Technical Skills

- **Languages:** Python, Java, LaTeX
- **Libraries:** TensorFlow, NumPy, Keras
- **OS:** Windows, Unix/Linux