Daniel Kim

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EDUCATION

Yale University, New Haven, CT   Expected Graduation 2024
Prospective BS in Computer Science and Economics

Bergen County Academies – Academy for Technology & Computer Science, Hackensack, NJ   Graduation Year 2020
Unweighted GPA: 3.992/4.000
Selected Courses: Data Structures, Advanced Math Topics, Computational Theory, Functional Programming, AP Analytical Calculus (BC+), AP Computer Science A, Advanced Precalculus with Discrete Topics, Mathematical Structures and Proofs, Intro to Web App Development, AP Chemistry, AP Physics C

EXPERIENCE

Rutgers Discovery Informatics Institute, *Research Intern*, New Brunswick, NJ   Sept 2019 – May 2020
- Designed and implemented API to customize experiments on reserved remote nodes in Grid'5000, a testbed for research in large-scale distributed systems, with Python library Execo
- Automated deployment of R-Pulsar (IoT Edge Framework) using API to reduce installation time by ~30%
- Analyzed large datasets of taxi trip reports via batch processing (Matplotlib) and stream processing (Apache Flink)

Gauss Academy of Mathematical Education, *Coding Workshop Instructor*   Mar 2020 – Apr 2020
- Taught Python GUI programming with libraries Turtle and Tkinter to 20+ middle school students 3 days/week
- Designed and planned curriculum and course materials and debugged students' programs

ACTIVITIES & LEADERSHIP

Bergen County Academies Math Team, *Webmaster*, Hackensack, NJ   Sept 2019 – Jun 2020
- Developed official website (generated 15,000+ pageviews) to host meeting lecture notes, past contest files, and preparatory resources; learned Materialize for responsive design and Firebase as backend to host admin data
- Facilitated communication among coaches, lecturers, and members via dynamic updates and blog posts, leading to ~70% increase in top 2.5%/5% scorers in the American Mathematics Competitions (AMC) 10/12

8th Annual Joe Holbrook Memorial Math Competition, Hackensack, NJ   Jun 2019 – Oct 2019
Webmaster, Volunteer Leader, and Problem Committee Member
- Coordinated 20+ volunteers to help proctor 400+ participants at an annual middle school math contest
- Took initiative to revamp and regularly update website and actively promote the event on social media
- Invented and proposed 50+ math problems; rated hundreds by quality and difficulty

PUBLICATION

***Advanced Precalculus**, Textbook Author* (ISBN-13: 978-0578479439)   Published Mar 2019
- Authored and published a 350-page textbook on proof-based precalculus and introductory calculus concepts
- Adapted as official textbook by the teacher for the course "Advanced Precalculus with Discrete Topics"
- Presented work to visiting professors and graduate students as part of introduction to school math curriculum

TECHNICAL SKILLS

- *Languages:* Proficient in C++, Python, LaTeX; Prior Experience in Java, HTML, CSS, JavaScript
- *Frameworks/Technologies:* Git, jQuery, NumPy, Adobe Photoshop, Microsoft Office

HONORS & AWARDS

USA Computing Olympiad Gold Division	Mar 2018
American Computer Science League (ACSL) 2020 Finals – 2nd Place Senior Division	May 2020
MathWorks Math Modeling (M3) Challenge – Honorable Mention (1/22 out of 760 math papers)	Mar 2020
4x AIME Qualifier (highest score 10) via top 2.5%/5% score on AMC 10/12	2017-2020
Technology Student Association (TSA) TEAMS 1st Place NJ, 2nd Place National (9th/10th Grade Division)	Jun 2018
National Merit $2500 Scholarship Winner	Mar 2020