

DUNCAN GREENE

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EDUCATION

Columbia University

Aug 2024 – May 2026

B.S. in Computer Science, Statistics Minor, 4.00 Cumulative GPA

New York, NY

Activities

- Columbia Poker Club, Data Science Society, Table Tennis Club.

Relevant Coursework: Artificial Intelligence, Machine Learning, Advanced Programming in C, Operating Systems, Databases, C++ for C Programmers, Fundamentals of Computer Systems.

Graduate Level: Elementary Stochastic Processes, Statistical Inference.

College of The Holy Cross

Aug 2021 – May 2024

B.A in Mathematics, Magna Cum Laude

Worcester, MA

Activities

- Computer Science Tutor, Pi Mu Epsilon Math Honors Society, Dean's List - Every Semester.
- 3 year graduate, in pursuit of 5-year dual degree program with Columbia.

Relevant Coursework: Data Structures, Analysis of Algorithms, Multivariable Calculus, Linear Algebra, Probability Theory, Computational Geometry, Ordinary/Partial Differential Equations, Discrete Math, Group Theory, Real Analysis, Principles of Economics, Physics I & II, Chemistry I.

EXPERIENCE

Private Wealth Partners, LLC (\$2B AUM)

Jun 2024 – Aug 2024

Data Analytics Intern

Mill Valley, CA

- Managed our internal database, directed onboarding of new client information, and restructured legacy *Client Investment Guidelines* data to decrease retrieval time for portfolio managers.
- Developed a Python script to parse CSV files from our *Schwab* database and automate the generation of interactive infographics to be used as presentation material in client meetings.

PROJECTS

HTTP/1.0 Web Server and Backend | C

Dec 2024

- Wrote a [web server](#) that leverages Sockets API to bind and listen on a local port for incoming TCP connections, accepting HTTP/1.0 GET requests for static content and returning the specified files.
- GET requests in the form of `/mdb-lookup?key=string` prompt the web server to query [this backend server](#), format the response into an HTML table, and then return it to the client.

CNN Sign Language Classifier | Python, Jupyter Notebook, TensorFlow, Keras

Nov 2024

- Designed and implemented a [Python program](#) to train a Convolutional Neural Network (CNN) (using *TensorFlow* and *Keras*) for classifying sign language hand gestures, achieving $\sim 92\%$ average accuracy on random test data.
- The model features *Conv2D* layers (*ReLU* activation) for feature extraction, *MaxPooling* for downsampling, and a *softmax* 26 neuron output layer to predict the probability of each letter in the alphabet.

2048 Solver | Python

Oct 2024

- Created a [Python program](#) to beat the game 2048 using the Expectiminimax Adversarial Search Algorithm with $\alpha - \beta$ pruning, Iterative Deepening Search, and a custom composite snake-based heuristic.
- Reaches the 2048 tile $\sim 96\%$ of the time and the 4096 tile $\sim 24\%$ of the time given stochastic tile spawns.

Convex Hull Maximin Algorithm | Python, NumPy, SciPy

Dec 2023

- Designed an algorithm that, when given a set of points, computes the binary partition such that the maximum distance between convex hulls is minimized.
- Wrote [a paper](#) discussing the algorithm in depth and its applications in Computational Geometry.

SKILLS & INTERESTS

Skills: C, C++, Python, Linux, MIPS Assembly, SQL, Tableau, R, Git, HTML & CSS, Vim, LaTeX, MS Office Apps, Common Python Libraries (Pandas, TensorFlow, PyTorch, NumPy, etc).

Interests: Math, Poker, [Piano & FPV drones](#), Card Games, Rubik's Cube Speedsolving, Basketball.

COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

NAME: Duncan Christopher Greene
SSN#: XXX-XX-1953
SCHOOL: FU FOUNDATN SCHL OF ENGINEERING & APPLIED SCIENCE:UGRAD

CANDIDACY: Bachelor of Science
PROGRAM: DUAL JOINT BS/BA: ENGINEERING AND
AFFILIATE COLLEGE COMBINED PLAN
MAJOR: COMPUTER SCIENCE
MINOR: STATISTICS

PROGRAM TITLE: COMPUTER SCIENCE

SUBJECT COURSE TITLE		POINTS GRADE	
NUMBER			
Fall 2024			
COMS	W 3157 ADVANCED PROGRAMMING	4.00	A-
COMS	W 4701 ARTIFICIAL INTELLIGENCE	3.00	A
CSEE	W 3827 FUNDAMENTALS OF COMPUTER	3.00	A+
MUSI	UN 1002 FUNDAMENTALS OF MUSIC	3.00	A
STAT	GU 4207 ELEMENTARY STOCHASTIC PROCESSES	3.00	A+
		GPA	4.041

Spring 2025			
COMS	W 4111 INTRODUCTION TO DATABASES	3.00	
COMS	W 4118 OPERATING SYSTEMS I	3.00	
COMS	W 4771 MACHINE LEARNING	3.00	
COMS	W 4995 C++ FOR C PROGRAMMERS	3.00	
STAT	GU 4204 STATISTICAL INFERENCE	3.00	

REMARKS

Cumulative GPA: 4.041
68.00 Credits Transferred from College of Holy Cross

This official transcript was produced on
JANUARY 29, 2025.



SEAL OF COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Barry S. Kane

Barry S. Kane
Associate Vice President and University Registrar



Columbia College, Engineering and Applied Science, General Studies, Graduate School of Arts and Sciences, International and Public Affairs, Library Service, Human Nutrition, Nursing, Occupational Therapy, Physical Therapy, Professional Studies, Special Studies Program, Summer Session

A, B, C, D, F (excellent, good, fair, poor, failing). NOTE: Plus and minus signs and the grades of **P** (pass) and **HP** (high pass) are used in some schools. The grade of **D** is not used in Graduate Nursing, Occupational Therapy, and Physical Therapy.

American Language Program, Center for Psychoanalytic Training and Research, Journalism

P (pass), **F** (failing). Grades of **A, B, C, D, P** (pass), **F** (failing) — used for some offerings from the American Language Program Spring 2009 and thereafter.

Architecture

HP (high pass), **P** (pass), **LP** (low pass), **F** (failing), and **A, B, C, D, F** — used June 1991 and thereafter **P** (pass), **F** (failing) — used prior to June 1991.

Arts

P (pass), **LP** (low pass), **F** (fail). **H** (honors) used prior to June 2015.

Business

H (honors), **HP** (high pass), **P1** (pass), **LP** (low pass), **P** (unweighted pass), **F** (failing); plus (+) and minus (-) used for **H, HP** and **P1** grades Summer 2010 and thereafter.

College of Physicians and Surgeons

H (honors), **HP** (high pass), **P** (pass), **F** (failing).

College of Dental Medicine

H (honors), **P** (pass), **F** (failing).

Law

A through **C** [plus (+) and minus (-) with **A** and **B** only], **CR** (credit - equivalent to passing). **F** (failing) is used beginning with the class which entered Fall 1994. Some offerings are graded by **HP** (high pass), **P** (pass), **LP** (low pass), **F** (failing). **W** (withdrawn) signifies that the student was permitted to drop a course, for which he or she had been officially registered, after the close of the Law School's official Change of Program (add/drop) period. It carries no connotation of quality of student performance, nor is it considered in the calculation of academic honors.

E (excellent), **VG** (very good), **G** (good), **P** (pass), **U** (unsatisfactory), **CR** (credit) used from 1970 through the class which entered in Fall 1993.

Any student in the Law School's Juris Doctor program may, at any time, request that he or she be graded on the basis of Credit-Fail. In such event, the student's performance in every offering is graded in accordance with the standards outlined in the school's bulletin, but recorded on the transcript as Credit-Fail. A student electing the Credit-Fail option may revoke it at any time prior to graduation and receive or request a copy of his or her transcript with grades recorded in accordance with the policy outlined in the school bulletin. In all cases, the transcript received or requested by the student shall show, on a cumulative basis, all of the grades of the student presented in single format – i.e., all grades shall be in accordance with those set forth in the school bulletin, or all grades shall be stated as Credit or Fail.

Public Health

A, B, C, D, F - used Summer 1985 and thereafter. **H** (honors), **P** (pass), **F** (failing) — used prior to Summer 1985.

Social Work

E (excellent), **VG** (very good), **G** (good), **MP** (minimum pass), **F** (failing).

A though **C** is used beginning with the class which entered Fall 1997. Plus signs used with **B** and **C** only, while minus signs are used with all letter grades. The grade of **P** (pass) is given only for select classes.

OTHER GRADES USED IN THE UNIVERSITY

AB = Excused absence from final examination.

AR = Administrative Referral awarded temporarily if a final grade cannot be determined without additional information.

AU = Audit (auditing division only).

CP = Credit Pending. Assigned in graduate courses which regularly involve research projects extending beyond the end of the term. Until such time as a passing or failing grade is assigned, satisfactory progress is implied.

F* = Course dropped unofficially.

IN = Work Incomplete.

MU = Make-Up. Student has the privilege of taking a second final examination.

R = For the Business School: Indicates satisfactory completion of courses taken as part of an exchange program and earns academic credit.

R = For Columbia College: The grade given for course taken for no academic credit, or notation given for internship.

R = For the Graduate School of Arts and Sciences: By prior agreement, only a portion of total course work completed. Program determines academic credit.

R = For the School of International and Public Affairs: The grade given for a course taken for no academic credit.

UW = Unofficial Withdrawal.

UW = For the College of Physicians and Surgeons: Indicates significant attempted coursework which the student does not have the opportunity to complete as listed due to required repetition or withdrawal.

W = Withdrew from course.

YC = Year Course. Assigned at the end of the first term of a year course. A single grade for the entire course is given upon completion of the second term. Until such time as a passing or failing grade is assigned, satisfactory progress is implied.

OTHER INFORMATION

NOTE: All students who cross-register into other schools of the University are graded in the **A, B, C, D, F** grading system regardless of the grading system of their own school, except in the schools of Arts (prior to Spring 1993) and in Journalism (prior to Autumn 1992), in which the grades of **P** (pass) and **F** (failing) were assigned. Notations at the end of a term provide documentation of the type of separation from the University.

% of **A** Effective fall 1996: Transcripts of Columbia College students show the percentage of grades in the **A (A+, A, A-)** range in all classes with at least 12 grades, the mark of **R** excluded. Calculations are taken at two points in time, three weeks after the last final examination of the term and three weeks after the last final of the next term. Once taken, the percentage is final even if grades change or if grades are submitted after the calculation. For additional information about the grading policy of the Faculty of Columbia College, consult the College Bulletin.

KEY TO COURSE LISTINGS

A course listing consists of an area, a capital letter(s) (denotes school bulletin) and the four digit course number (see below).

The **capital letter** indicates the University school, division, or affiliate offering the course:

A	Graduate School of Architecture, Planning, and Preservation
B	School of Business
BC	Barnard College
C	Columbia College
D	College of Dental Medicine
E	School of Engineering and Applied Science
F	School of General Studies
G	Graduate School of Arts and Sciences
H	Reid Hall (Paris)
J	Graduate School of Journalism
K	School of Library Services/Continuing Education (effective Fall 2002)
L	School of Law
M	College of Physicians and Surgeons, Institute of Human Nutrition, Program in Occupational Therapy, Program in Physical Therapy, Psychoanalytical Training and Research
N	School of Nursing

O	Other Universities or Affiliates/Auditing
P	School of Public Health
Q	Computer Technology/Applications
R	School of the Arts
S	Summer Session
T	School of Social Work
TA-TZ	Teachers College
U	School of International and Public Affairs
V	Interschool Course
W	Interfaculty Course
Y	Teachers College
Z	American Language Program

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The **first digit** of the course number indicates the level of the course, as follows:

0	Course that cannot be credited toward any degree
1	Undergraduate course
3	Undergraduate course, advanced
4	Graduate course open to qualified undergraduates
5	Graduate course open to qualified undergraduates
6	Graduate course
7	Graduate course
8	Graduate course, advanced
9	Graduate research course or seminar

Note: Level Designations Prior to 1961:

1-99 Undergraduate courses
100-299 Lower division graduate courses
300-999 Upper division graduate courses

The term designations are as follows:

X=Autumn Term, **Y**=Spring Term, **S**=Summer Term
Notations at the end of a term provide documentation of the type of separation from the University.

Unofficial Transcript

Academic Program History

Table with 3 columns: Date, Status, Program. Rows include Undergraduate status from 12-15-2020 to 05-01-2024, and Undeclared Major, Computer Science Major, and Mathematics Major.

Spring 2022

Table with 4 columns: Course, Description, Attempted, Earned, Grade, Points. Rows include CSCI 235, MATH 136, MONT 101S, PHIL 110, and summary rows for Term GPA, Cum GPA, and Dean's List - Second Honors.

Transfer Credits

Transfer Credit from Arizona State University
Applied Toward Undergraduate Program

Summer 2022

Table with 4 columns: Course, Description, Attempted, Earned, Grade, Points. Rows include MUSC 238 and summary rows for Term GPA, Cum GPA.

2023 SUMR

Table with 6 columns: Course, Description, Attempted, Earned, Grade, Points. Row includes SPA 101 Elementary Spanish I.

Fall 2022

Table with 4 columns: Course, Description, Attempted, Earned, Grade, Points. Rows include MATH 241, MATH 243, PHYS 115, VAHI 100, and summary rows for Term GPA, Cum GPA, and Dean's List - First Honors.

Test Credits

Test Credits Applied Toward Undergraduate Program

Fall 2021

Table with 6 columns: Course, Description, Attempted, Earned, Grade, Points. Row includes CSCI 161-AP Techniques of Programming. Summary row: Transfer Totals: 1.00.

Test Credits Applied Toward Undergraduate Program

Sp 2023

Table with 6 columns: Course, Description, Attempted, Earned, Grade, Points. Row includes SPAN 101-LG Course Equivalent-Elem SPAN 1. Summary row: Transfer Totals: 1.00.

Spring 2023

Table with 4 columns: Course, Description, Attempted, Earned, Grade, Points. Rows include ENGL 100, MATH 244, PHYS 116, STAT 375, and summary rows for Term GPA, Cum GPA, and Dean's List - Second Honors.

Beginning of Undergraduate Record

Fall 2021

Table with 6 columns: Course, Description, Attempted, Earned, Grade, Points. Rows include CSCI 132, ECON 110, MATH 135, MONT 100S, and summary rows for Term GPA, Cum GPA, and Dean's List - Second Honors.

Summer 2023 - SA Session 1

Table with 4 columns: Course, Description, Attempted, Earned, Grade, Points. Rows include ABRD 399, CLAS 500, and summary rows for Term GPA, Cum GPA.

Unofficial Transcript

Fall 2023

Course		Description	Attempted	Earned	Grade	Points
CHEM	181	Atoms & Molecules	1.50	1.50	A	6.000
MATH	351	Modern Algebra 1	1.00	1.00	A	4.000
MATH	392	Seminar	1.00	1.00	A	4.000
Course Topic: Computational Geometry						
SPAN	201	Intermediate Spanish 1	1.00	1.00	A-	3.700
			Attempted	Earned	Points	
Term GPA:			4.50	4.50	17.700	
Cum GPA:			24.00	26.00	86.525	

Dean's List - First Honors

Spring 2024

Course		Description	Attempted	Earned	Grade	Points
ABRD	348	Univ of Melbourne, Australia	4.00	4.00	T	
MATH	529	Real Analysis			A	
MATH	530	Engineering Mathematics			A	
MUSC	520	Music History 1: 17th&18th C.			A	
RELS	508	God & the Natural Sciences			A	
			Attempted	Earned	Points	
Term GPA:			4.00	4.00		
Cum GPA:			28.00	30.00	86.525	

Fall 2024

Course		Description	Attempted	Earned	Grade	Points
AACP	325	3-2 Engineering: Columbia U	4.00			

Undergraduate Career Totals						
Cum GPA:			28.00	30.00	86.525	

End of Transcript