Julius “JT” Klenke

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Education

Cornell University, College of Engineering, Ithaca, NY
Bachelor of Science in Computer Science – *2022-26*
GPA *4.00*
Related Courses
Object-Oriented Programming & Data Structures (Java), Functional Programming (OCaml), Discrete Structures, Algorithms, Physics: Oscillations, Waves and Quantum Physics

Reno High School, Reno, NV
Graduated with Honors – *2022*
AP Scores
Total of 12 AP exams with 10 scores of 5, including: Computer Science A, Computer Science Principles, Calculus BC, Physics C: Mechanics, Physics C: Electricity and Magnetism

Computer Science Experience

UAV Club, Cornell – *2022-Present*
Wrote, optimized A* and RTT algorithms in Java and C. Preprocessed data for computer vision model training.

Stellarator Research Assistant, Cornell – *2022-Present*
Wrote algorithms to optimize shape for magnetic confinement coils of stellarator nuclear fusion reactor using gradient descent and Gauss-Newton.

Mechanical Engineering Internship, University of Nevada, Reno – *2021*
Collaborated with graduate students to automate data analysis and ionic liquid production under the guidance of Professor Pradeep Menezes. Processed wear-track depth data to determine surface roughness and wear volume.

Evolutionary Algorithm Design, Tactical Air Support, Inc. – *2020-21*
Coded evolutionary algorithm in Python to optimize UHF communications antenna design for the broadband frequency range 108-400 MHz. The final design is to be used on F-5 Navy training jets.
Wrote independent research paper: Evolutionary Algorithm Designed Broadband Plate Antenna for F-5 Vertical Stabilizer.

Compose Timelapse Video into a Single Image – *2021*
Created images from timelapse videos using multiprocessing, FFmpeg and PIL.

Parameterization of a Path – *2020*
Created a visual representation of a Fourier transform using a DFT in the complex plane.
Application: Allows parameterization for any curve in 2d space, useful to compute path integrals for non-conservative functions.

Games Creation – *2015-20*
Unity (C#): 2D and 3D games
Python: side scrolling obstacle dodging game
C++: block pushing puzzle game

Work Experience

Freelance Employee, **LamTex Composites, Inc.** – *2018-22*
Designed and built LamTex Composites, Inc. website. Packaged and labeled product for delivery to military customers. Delivered product bi-weekly.

Antenna Design and Testing, Tactical Air Support, Inc. – *2020-21*
Performed VSWR sweeps with RigExpert equipment, evolutionary algorithm design.

Food Delivery Driver, DoorDash, Inc. – *2021-22*
Delivered food to customers as a freelance driver.

Service and Volunteer Activities

Food Bank Volunteer, Food Bank of Northern Nevada – *2020-21*
Packaged and distributed canned and fresh food for Sierra Nevada's needy population.

Air Sailing Clean-up, Air Sailing Gliderport – *2018-20*
Cleaned and maintained hanger and runway for local glider port facility.

Highschool Computer Science Tutor, Reno High School – *2019*
Tutored weekly for Computer Science.