Synopsis

Name:	Christopher Jay Harris
Internet Phone:	240/560-8077
Mobile:	915/244-8575
Website:	https://cjharris.github.io/
Mail:	cjharrisatru@gmail.com
Location:	4030 Kemp Ave #5 El Paso, TX 79904-5600

Relocation:	Yes
Visa Status:	US citizen
Notice:	1 month
Attributes:	20 years semiconductor processing / characterization 12 years data science / artificial intelligence 8 years pharmaceutical development
Education:	BS Chemical Engineering 1984 MS Material Science 1999 MS Physical Chemistry 2003

Overview

As we approach a new era of artificial general intelligence (AGI), where artificial intelligence approaches human aptitude, I plan to leverage my skills in computer programming, optical sensors, and process control...

With over 20 years as a Research Scientist, I have coauthored roughly 16 papers, half under the direction of John Haggerty at MIT, and the remainder with support from Klaus Bachmann at NC State. During the course of research, I have: (1) invented a patentable 'symmetric proportional control' algorithm for laser cavity optimization, stabilizing the growth of thin films (2) fabricated the first laser-induced, chemical vapor deposition, amorphous silicon solar cells, (3) developed a microwave plasma, chemical vapor deposition system, to create polycrystalline diamond from methane gas, in a regime where kinetics dominates over thermodynamics, (4) monitored the surface evolution of compound semiconductor heterostructure films, in a chemical beam epitaxy system, with plane polarized reflectance spectroscopy, pioneered by our research group.

In parallel with my academic career, I plunged into the world of macroeconomics, human behavior, and statistical analysis, through stock and futures trading. Using quantitative investment strategies, participants utilize technical analysis methods to achieve high probability trades. To handle market data, I applied digital signal processing techniques, in the spirit of John Ehlers, an Electrical Engineer from Raytheon. Along the way, I combined statistics with digital signal processing to produce highly responsive indicators, enhancing trade signal clarity. By immersing myself in the data science of financial markets, and backtesting of trading strategies, I have improved my computer programming skills, and established more techniques to deal with data interpretation.

As we approach a new era of artificial general intelligence (AGI), where artificial intelligence approaches human aptitude, I plan to leverage my skills in computer programming, optical sensors, and process control to facilitate automation within the manufacturing and office environments. The same principles which apply to measuring process parameters and regulating control valves through data acquisition can be extended to robotic autonomy. I invite you to visit my personal website to view current literature and computational projects. If you have any concerns, feel free to contact me.

Christopher J Harris

Christopher J Harris

https://cjharris.github.io/ El Paso, TX +1 240 560 8077 cjharrisatru@gmail.com

Profile

Chemical Engineer seeking a Process Engineer, Research & Development, or Data Science role, applying my core skills in:

custom agents	crystal growth	sensor integration
prompt engineering	surface science	robotic implementation
visual storytelling	chemical vapor deposition	computer modeling
workflow automation	molecular beam epitaxy	statistical analysis
additive manufacturing	semiconductor devices	process control

Thesis

Real Time Reflectometry of Ga–based Compound Semiconductor Films on Silicon during Plasma Enhanced Molecular Beam Epitaxy, NCSU Materials Science Dept: **1999**.

Character

Clifton Strengths

Strategic	faced with any given scenario, can quickly spot the relevant patterns.
Learner	have a great desire to learn and want to continuously improve.
Ideation	able to find connections between seemingly disparate phenomena.
Futuristic	inspired by the future and what could be.
Self-Assurance	possess an inner compass to instill confidence in decision making.

Experience

Prompt Engineer, Outlier AI: San Francisco, CA (10/24 to present)

- Generate prompt questions to evaluate AI model responses to python programming tasks.
- Write and rewrite AI model responses to prompt questions with accurate python code.

Network Member, Gerson Lehrman Group: Austin, TX (4/20 to present)

- Appear as an expert witness in a patent lawsuit regarding diamond thin films.
- Provide scientific insight in a myriad of semiconductor issues.

Quantum Trader, Independent (5/84 to present)

- Broaden the scope to include both fundamental evaluation and technical analysis.
- Combine statistics with digital signal processing to produce indicators with better trade signal clarity.
- Implement python programming to learn hedge fund strategies.
- Evaluate fundamental aspects of technology and pharmaceutical sectors.
- Deploy venture capital principles to choose lucrative issues, including initial pubic offerings.

Laboratory Technician, Genesis Biotechnology Group: Hamilton, NJ (7/20 to 10/21)

- Process COVID-19 nasal swabs in Biological Safety Level 2 hoods under CDC guidelines.
- Extract nucleic acid samples from blood, urine, spinal, and other body fluids using Vacuum Filtration or Magnetic Bead separation.
- Perform static Polymerase Chain Reaction (PCR) and dynamic PCR (qPCR).

Education

MS *Physical Chemistry*	Rutgers: New Brunswick, NJ	Jan 2003
MS *Material Science*	North Carolina State: Raleigh, NC	unofficial
BS *Chemical Engineering*	Texas A&M: College Station, TX	May 1984
HS *Diploma*	Waltham High: Waltham, MA	Jun 1979

Honor

Bausch & Lomb Science Award