

# MATT G. WEIN

1234 56<sup>th</sup> Ave | Fort Pierce, FL 34949 | C: 999.999.9999 | O: 999.999.9999 | xxxxxx@xxx.xxx

---

## LICENSURE

Board of Professional Engineers, *Florida License: 110021216*

2017

## EDUCATION

<u>University of Florida</u> – Ph.D. Cybernetics & Artificial Intelligence	<u>Expected 2025</u>
<u>University of Florida</u> – M.Eng. Electrical & Computer Engineering	<u>2022</u>
<u>Virginia Tech</u> – Graduate Credits, Naval Engineering, Systems Design	<u>2019</u>
<u>University of Florida</u> – B.S. Civil & Coastal Engineering - Cum Laude	<u>2017</u>
<u>Moscow State University</u> – Russian Language Certification	<u>2015</u>

**Proficiencies:** Assembly, C/C++, VHDL, Java, Perl, Python, Fortran, MATLAB, DSP, Signals & Systems, Comms, Microprocessors, FPGA, Machine Learning, Digital Logic, AutoCAD, SolidWorks, RISA3D, Cost Analysis, IEEE, AISC

---

## RELATIVE EMPLOYMENT

\*Contact information available upon request

**Graduate Research Assistant** | **UNIVERSITY OF FLORIDA** | Gainesville, FL Jan 2022 – Present

Implemented advanced machine learning techniques using data acquired through remotely sensed imagery (hyperspectral/LiDAR) from satellites, airplanes, and drones to understand forests at scales from individual trees to entire continents. Under the guidance of Dr. Alina Zare, work on the Macrosystems NEON Project:

- Produced improved spatially explicit data on species and traits for ~50 million individual trees.
- Disentangled the importance of processes driving species distribution, abundance and biodiversity scales.
- Developed cross-scale models of tree structural traits and allometry that incorporate environmental variation and biological interactions to inform biomass estimation
- Analysis of OSBS – focus on single site.

**Graduate Teaching Assistant** | **UNIVERSITY OF FLORIDA** | Gainesville, FL May 2021 – Sept 2021

Instructed alongside Dr. Eric M. Schwartz in his Microprocessor Applications course. Proctored labs, practical examinations, conducted office hours weekly and graded student submissions. Topics covered included program structures, assembly and C programming for memory-mapped peripherals including UART, DMA, AD/DA converters and interrupt controllers.

**Federal Emergency Response Official** | **DEMSI (SERCO)/FEMA** | N/A Nov 2019 – Present

- Conducted site inspections, identified and assessed, validated infrastructure damage; evaluated scopes
- Reviewed and analyzed professional architectural/engineering reports, designs and as-built plans.
- Validated applicant-provided scopes of work, including related code and standard requirements.
- Advised FEMA staff on the technical validity of claims presented under FEMA's arbitration process.
- Responsible for design, development, implementation, and analysis of technical products and systems. Performed engineering design evaluations.
- Developed a range of products and their respective cost estimates. Recommended alterations to development and design to improve quality of products and procedures.

**Project Engineer, Manager** | **JOHNSON BROS CORP** | Daytona Beach, FL Sept 2018 – Sept 2019

FDOT Project – Veterans Memorial Bridge; Monitored progress, production, schedule deviations and variances and developed alternate methods for corrective action by studying project plan and specifications, calculating time requirements, updating schedule and sequencing project elements for constructability. Prepared CIOs, project status and schedule progress report documents by collecting, analyzing, and summarizing information and trends; developing trending charts, schedule analysis and integrated project plans regularly, determining actions for field teams. Reviewed project specifications by studying product design, customer requirements, and performance standards. Controlled project costs and monitored budget by developing budgeting and cost projections, also coordinating with vendors for material needs. Performed structural, geotechnical monitoring, material and project plan compliance as required by contract documents. Assessed impacts to critical path and near-critical activities. Verified schedule integrity and evaluated logic/float paths. Supervised operations in field.

# MATT G. WEIN

## **Structural Engineer** | **SOUTHLAND HOLDINGS, JOHNSON BROS** | Orlando, FL **Aug 2017 – Sept 2018**

Construction engineering design contractor for heavy civil and marine projects. Design procurement includes hydro facilities, suspension, segmental, bascule, swing and lift span bridges, power plant infrastructure, cofferdams, retaining walls, crane rigging, picking beams and pick analysis. Submit plans to US Army Corp for approval. Ensure compliance with AISC, ASTM, DOT, USACE EM-385, and OSHA standards. Provide means and methods for field. Meet with partnering companies to optimize erection, demo, materials development and application on jobs. Currently participating in design build and other various project delivery methods.

### **Project Highlights:**

Central Business District Bridges, Birmingham AL  
Bascule Bridge over Lake Worth Lagoon, Pam Beach FL  
Veterans Memorial Bridge, Daytona FL  
Kentucky Lock & Dam, Grand Rivers KY  
SELA 26 Levee, New Orleans LA  
Lewis & Clark Bridge, Williston ND  
Capers Ridge Pump Station, Houston TX

### **Certifications:**

OSHA 10  
OSHA 30  
First Responder CPR/AED/First Aid  
Primavera P6 Professional Management  
Concrete Field Technician Level 1 & 2  
Stormwater & Erosion Inspector  
Transportation Construction Inspector

## **Geotechnical Engineer** | **FROEHLING & ROBERTSON** | Washington D.C. **June 2017 – Aug 2017**

Construction material testing and geotechnical monitoring. Coordinated testing for projects, oversaw CMT equipment maintenance and calibration for annual review by Cement & Concrete Reference Laboratory (CCRL). Conducted data analysis, managed project scheduling, visited sites for internal review and record.

### **Project Highlights:**

Walter Reed Army Medical Center, Bethesda MD  
Ronald Reagan Airport, Washington DC  
US Naval Research Laboratory, Chesapeake Bay MD  
Naval Surface Weapons Center, Dahlgren VA

### **Certifications:**

CMT Specialist  
APNGA Portable Nuclear Gauge Safety  
Nuclear Gauge Safety & Transportation  
HAZMAT Safety

## **Project Manager** | **ADVANCE TESTING** | West Point, NY **Jul 2014 – Dec 2014**

Performed onsite material inspection of concrete, steel and nuclear density gauge testing of HMA. Registered with ACI, AGC, ASC, HAZMAT, NRC, NYDOT. Security clearance, entrusted access to radioactive materials, devices, equipment and company vehicles for site travel. Delivered samples to DOT materials lab; performed QCQA inspections on site and in house. Determined level of quality and respective bid bonus percent for contractors upon completion. DOT 50, 60, 70, & 80 series roadways on HMA. On duty 70-100hrs per week.

### **Project Highlights:**

Michie Stadium, West Point Military Academy NY  
New Tappan Zee Bridge, Tarrytown NY  
Orange Regional Medical Center, Middletown NY  
Taconic State Parkway, Hopewell Junction NY

### **Certifications:**

AASHTO Level 1  
ACI Concrete Field Technician Grade I  
Associated General Contractors of NYS  
NYSHMA Density Testing Inspector

## **Designer & Distributor** | **SOCIAL LIGHT INC.** | Vero Beach, FL **Oct 2004 – Dec 2013**

Handled business communications, container shipments, order processing and analyzed warranty requests, addressing client prior to approval. Tended verification and renewal of shipping certifications according to national and international legislature, aided clients during preliminary purchase drafting stages and educated new clientele on proper filling techniques and product maintenance. Previously acted as logistics coordinator, QCQA tech, and pyro-technician, ensuring DOT, Federal Bureau of Explosives and HAZMAT standards were met while overseeing the quality control of lighters, canned butane, accessories, and respective packaging.

### **Technical Involvement:**

- Visited factory owners and engineers on business trips to Shenzhen, Suzhou, and Wenzhou in China to improve functionality as well as design new models and inspection methods for upcoming seasons.
- Represented company at *AmericasMart Trade Center* (Atlanta, GA). Largest international permanent trade center for wholesale in the US. Clients included: HSN, Neiman Marcus, Overstock, Zippo

# MATT G. WEIN

---

## RECENT VOLUNTEER SERVICE

ASCE - Make-A-Wish Star Wars Half Marathon	Orlando, FL
ASCE - Toys for Tots Collection	Orlando, FL
ASCE - November Food Drive Social	Orlando, FL
ASCE Share-A-Meal at Ronald McDonald House	Orlando, FL
SAR EL, VFI - Israeli Defense Forces	Tsipori, Israel
UF Hillel & St Francis House	Gainesville, FL
Academic Treks Cultural Immersion	Guadeloupe, Dept. of France
Ashwood Grove Polo & Equine Rehabilitation	Vero Beach, FL
Habitat for Humanity	Melbourne, FL
SpringFest - Case Western Reserve	Cleveland, OH
Ducks Unlimited	Donor
The Battle Buddy Foundation	Donor

---

## HONORS & SOCIETIES

Magna Cum Laude & Consecutive Deans List	50 <sup>th</sup> Anniversary ΣAM – Mu Gamma Scholarship
ACI, AKC, ASCE, IEEE, FES, MENSA, NFGSPC, NSBE,	Project Beyond Alumni & Birthright Participant
NSF, NASAR, NAPSG, OSHA, SARCF, SWUSAR, USAR	Founder, President of DIY Engineers at UF
Ashwood Grove Polo & Goldstar Hungarian Vizslas	Theatre – ASM, Light/soundboard, Set design
UFIC Ambassador for Russia	VFI Scholarship Recipient & VFI Ambassador

---

## FIELD INTERESTS

neural interfacing	drone & sonar applications in structural analysis
neural networks & deep learning	geothermal, deep earth digs & tunnel boring
digital and RF communication	sand dredging & oil refineries
cryptography/encryption	erosion prevention, retaining walls & biofilms
hyperspectral Signals	organic explosives & polymer materials
cyber-physical systems	optimization, structural rehabilitation
autonomous maritime navigation	BIM, 3D data modeling & drone applications
biometric verification technology	SAR GIS & emergency transport systems
pattern recognition & Intelligence	foreign services, search & rescue
micro-processors in avionics	Russian/American economic relations
biomedical engineering	cold weather construction methods
formula racing	cost analysis & public private partnerships
quantum computing	green engr vertical farming & crop propagation
high-speed transport	sustainability & emission regulation
weaponry defense systems	reinforced concrete, advance steel design
damage mitigation	offshore drilling, fracking
cyberphysical security	petroleum engineering
sensor and weapons systems	molten salt fueled nuclear reactors
orbital mechanics, propulsion	marine diesel, ocean city ports
government infrastructure, security systems	water treatment & waste management
submarines	desalination & water retention systems

