Gil Mebane

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EDUCATION

Duke University, Durham, NC — May 2028

B.S. Mechanical Engineering | Innovation & Entrepreneurship Certificate — GPA: 3.6/4.0

- Relevant Coursework: Materials Science, Thermodynamics, Fluid Mechanics, Business Leadership for Engineers
- Programs: AI Product Sprint, VC University (Berkeley Law), University of Edinburgh Study Abroad (Fall 2026)

PROFESSIONAL EXPERIENCE

Tulypp Capital Partners (TCP) — London, UK (Remote)

Growth Equity Analyst Intern — *Jun 2026 – Present*

- Source & diligence MedTech & aerospace deals for consortium of 1.5k+ family offices, former founders & VCs
- Support $1–10M investments alongside co-investors like Sequoia & a16z, contributing to $1B+ in portfolio raises
- Built TCP's first AI operations stack across Claude, Notion, HubSpot, Google Drive & other systems

Duke Ex-Vivo Organ Laboratory (DEVOL) — Durham, NC

Undergraduate Research Assistant — *Feb 2026 – Present*

- Designing patent-pending autonomous dialysis circuit for ex vivo organ perfusion to eliminate manual intervention
- Lead CAD, circuitry & embedded code on multimillion-dollar NIH- & VC-funded FDA Breakthrough Device
- Developing novel perfusion methods to extend donor organ viability & improve overall system performance

Asensus Surgical (Karl Storz Endoscopy) — Durham, NC

Mechanical Engineering Intern — *May 2025 – Aug 2025*

- Designed 5 components & 3 test fixtures for robotic laparoscopy systems with a multinational R&D team
- Cut machining costs 20%+ via GD&T & DFM fixes, & sped tolerance analysis 50% with novel SolidWorks method
- Achieved 99.8% accuracy in large-scale CAD migrations, outperforming prior contractors by 20%

LEADERSHIP & PROJECTS

Duke Club Fishing, *Founding Treasurer* — *Aug 2026 – Present*

- Co-founded 56-member club offering tournaments & excursions, collaborating with UNC & NC State teams
- Personally negotiating Gemlux sponsorship & alumni panel, following club's recent sponsorship by Z-MAN

ToleranceForge, *Founder & Developer* — *Jun 2026 – Present*

- Built multi-model AI tool that flags drawing GD&T errors, grounded in ASME Y14.5 & ISO 1101 standards
- Beta tested & refined with veteran engineers from Karl Storz & SpaceX, results featured in upcoming Duke article

Sigma Chi Beta Lambda Chapter, *Alumni, Recruitment & Housing Chair* — *Jan 2025 – Present*

- Lead relations with 1,250+ chapter alumni via advisory board, newsletters & self-built networking platform
- Recruited record 37-member class with $30k+ budget & 300+ attendee events, largest rush in chapter history
- Oversaw $100k+ housing & operations budget across multiple properties & chapter stakeholders

bCPAP Monitoring Device, *Research & Design Lead* — *Aug 2024 – Dec 2024*

- Led 4-person team to design locally manufacturable respiratory monitor for low-resource clinics in Uganda
- Engineered system compatible with 4+ bCPAP device models & configurations under strict cost constraints

ADDITIONAL INFORMATION

Engineering: SolidWorks, Onshape, GD&T, Tolerance Stack-Up, DFM, Injection Molding, 3D Printing, CNC

Software: Python (NumPy, pandas), MATLAB, Java, Arena PLM, Jira, AI-Assisted Full-Stack Development

Publication: *Ride Like the Wind Without Getting Winded* (SSRN, 2023), top 10 downloads in 3 SSRN categories

Activities: ENABLE Prosthetics Club, Theta Tau (New Member Educator), Duke Motorsports

Interests: Fishing & CAD Lure Design, Mountain Biking, Hiking, Photography, Woodworking, Car & Boat Restoration