

Mathew Brady (He/Him)

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Innovative Senior Software & Data Visualization Engineer with over a decade of experience architecting full-stack web applications and interactive data products. Proven track record as the sole design and development lead for the Center for American Progress, transforming complex policy datasets into high-impact digital stories, interactive maps, and standalone web applications. Expertly bridges the gap between complex engineering (React, Node.js, Python) and bespoke UI/UX design (D3.js, Mapbox, Adobe CC) to own the entire product lifecycle from initial sketch to production. Adept at leading cross-functional teams, managing high-profile stakeholder relationships, and delivering scalable digital solutions for high-stakes advocacy, policy, and media initiatives.

CORE TECHNICAL SKILLS

Languages & Frameworks:	JavaScript (ES6+), TypeScript, Python, React, Next.js, Node.js, HTML5, CSS3, SASS, AI development tools, Agile/Scrum Methodologies
Data Vis & Mapping:	D3.js, Mapbox, GIS, QGIS, Mapshaper, Datawrapper, Custom Interactivity & Charting Architecture
Database & Cloud:	PostgreSQL, MySQL, Git, GitHub Actions, AWS Infrastructure
Design & Strategy:	UI/UX Design, Wireframing, High-Fidelity Color Mockups, Adobe Creative Cloud (Illustrator, Photoshop, XD)
Management & Leadership:	Project Management, Cross-Functional Team Leadership, Budgeting, Client & Stakeholder Relationships, Digital Strategy
Languages:	Fluent in French

TECHNICAL & SOFTWARE ENGINEERING EXPERIENCE

Senior Software Engineer & Data Visualization Lead Center for American Progress (CAP)

October 2017 – October 2024
Washington, DC

Served as the sole full-stack technical architect, UI/UX designer, and product owner for the institution's most complex custom software solutions, standalone data-driven websites, and policy dashboards.

- **End-to-End Product Ownership:** Directed the entire digital development pipeline for major organizational assets, self-executing all phases from initial wireframing and high-fidelity color mockups to final full-stack deployment using React, Node.js, and D3.js.
- **Data-Driven Visual Storytelling:** Partnered directly with policy researchers and advocacy teams to translate massive, multi-variable policy datasets into deeply engaging, tailored interactive charts, custom plots, and geospatial maps that influenced national media and legislation.
- **Backend Infrastructure:** Engineered robust backend services and relational database schemas using Node.js, Python, and PostgreSQL; migrated fragmented legacy spreadsheets and tools into modernized, web-based applications to streamline internal workflows.
- **Technical Leadership & Mentorship:** Championed modern engineering and design standards internally, mentoring technical staff and managing specialized external engineering contractors to ensure on-time delivery of high-stakes visual projects.
- **Cross-Functional Media Asset:** Supplemented the communications and video teams as an on-call technical resource, executing independent travel videography, digital asset generation, and technical production for high-profile live events.

Design Lead & Co-Founder
AnalytixBar

July 2015 – October 2017
Gaithersburg, MD

Co-founded a boutique digital agency and acted as the sole external engineering partner for the Center for American Progress, establishing the architectural framework that led to an immediate in-house talent acquisition.

- **Client Engineering:** Consulted directly with CAP research teams to prototype and launch bespoke interactive dashboards and CRM-style workflows, proving so integral to core operational strategy that it prompted long-term full-time alignment.
- **Agency UI/UX & Delivery:** Oversaw multidisciplinary teams of developers and designers to build graphics, websites, and mobile interfaces for an expansive corporate and non-profit portfolio.
- **Enterprise Integration:** Leveraged MicroStrategy architecture training to successfully bridge legacy enterprise data reporting with bespoke, modern open-source frontends.

ADDITIONAL ENGINEERING & CREATIVE EXPERIENCE

Freelance Design Engineer & Fabricator
Self-Employed

June 2023 – Present
Chevy Chase, MD

Directs end-to-end design, advanced electrical engineering, and precision fabrication of bespoke, ultra-high-end technical products and rare vintage sound systems for elite international clients.

- **Hardware Engineering & Prototyping:** Design and architect highly complex, custom vintage audio enclosures and electrical components, utilizing 3D CAD modeling (Fusion 360), 3D printing, and precise circuit soldering to restore and upgrade rare equipment.
- **Client & Project Management:** Manage the full product lifecycle for high-net-worth clients, including premium vendor Deja Vu Audio, executing custom engineering commissions valued in the hundreds of thousands of dollars.
- **Technical Craftsmanship:** Apply multidisciplinary industrial skills—including MIG welding, sophisticated wood veneering, workshop safety management, and custom PC systems engineering—ensuring meticulous attention to structural and electrical integrity.

Co-Founder & Creative Director
Optimal Entertainment

July 2007 – July 2015
Wheaton, MD

- **Creative Project Management:** Wrote, directed, and produced professional feature films, short films, and documentaries, managing multi-disciplinary crews, film talent, and production assets of up to 50+ personnel.
- **Financial Operations:** Secured and managed private investor capital, aligning budgets with rigorous post-production workflows and timelines.
- **Digital Product Design:** Designed across a comprehensive marketing suite, launching promotional websites, interactive ad campaigns, and customized branding packages.

SECONDARY EXPERTISE (THE "HYBRID" EDGE)

Media & Production: Professional video editing (Premiere Pro, DaVinci Resolve, After Effects, Final Cut), sound engineering/mixing (ProTools, Logic, Audition, Ableton), camera and lighting setup, Unreal Engine 5.

Industrial Engineering: 3D printing, advanced prototyping, shop drawings, power tool operations, custom PC hardware architecture, hardware restoration.

EDUCATION

Marymount Manhattan College
Bachelor of Arts (B.A.) in Communication Arts, Minor in Business Management

Class of 2010
New York, NY