Terry Eppler

Arlington, VA 22202 Email Phone Portfolio Projects

Results-driven, quality-focused professional with extensive experience planning, staffing, and budgeting operations throughout the U.S. and abroad. Seeking to apply unique skills and vast knowledge of computer programming, web-development, analytics, and data science coupled with decades of experience ensuring organizational success s across the Active Duty, Federal Civilian Service, and a Fortune 500 Company by developing technological system.

Status

- Citizenship: USA
- Veteran Preference: 10 pts for 30% disabled or greater
- Federal Status: Aug 2007 to May 2024, GS-0560-14, 40 hrs/week
- Clearances Held: Public Trust, Confidential, Secret

Experience

US EPA Headquarters - Senior Analyst (GS-0560-14)

Oct 10, 2021 - Oct 10, 2024
1400 Pennsylvania Ave.
Washington, DC 20002
40-hrs/week

- Process Automation: Served as the Agency's financial system administrator responsible for the development and implementation of the Agency's payroll allocation models' integration into the budgeting automation system (BAS) ensuring 100% utilization of the Agency's expiring, appropriated funds. Applied systems development expertise to identify easy enhancements to dramatically improve budget processes directly impacting the agency's ability to conduct research, removal, and remediation operations.
- Content Management System: Spearheaded the EPA's mobile-first redesign & migration of the On-Scene Coordinator's Public Portal (www.epaosc.org) from a React-based Content Management System to Web Assembly integrating modern technology reducing latency by 45% while boosting usage by 70%. Integrated .NET Core plugins to ingest live EPA sensor feeds, exposed content via GraphQL endpoints, and automated XML-to-JSON transformations—supporting 1,000+ daily API calls with zero downtime.
- Business Intelligence: Developed the Environmental Appropriations Management System (eSAM) using C# Blazor and Web-Assembly (WASM) for managing federal appropriated funds by integrating data from diverse source into data visualization platforms such as Qlik and Tableau improving fund utilization and stakeholder access to vital information.
- Interactive Dashboards: Migrated 200+ legacy SSRS reports into a modern React/D3.js dashboard front end backed by .NET Core Web APIs, added role-based filtering and drill-down analytics—reduced report refresh intervals from hourly to per-minute and boosted user adoption by 70
- Responsive Applications: Developed the Environmental Award Management System (eSAM) using C# and ASP.NET MVC, managing federal procurement processes by integrating account-level information in the Agency's vendor payment systems, reducing procurement cycle time by 30% and enhancing transparency.
- Responsive Websites: Designed and implemented interactive D3.js and Canvas infographics for EPAOSC kiosks and dashboards—leveraged real-time APIs to animate charts and maps, boosting user comprehension metrics by 45% reducing development time by 60%

US EPA Office of Research& Development - Program Analyst (GS-0343-13)

Aug 8, 2007 - Oct 10, 2021
1550 Main Street Dallas, TX
40-hrs/week

- Workflow Management Software: Developed, implemented, deployed, and maintained the Agency's emergency operations financial database to ensure the continuity of operations during contingencies manpower adjustments, to reconcile appropriated funding levels adjusting for prior-year forecasts and current-year execution rating in direct support of Hurricanes Katrina, Gustav, Ike, Harvey, and the Deep Water Horizon Event leading to the overall identification and reallocation of $1,500,000 in unused, reimbursable funds ensuring end-of-response audit success.
- AI Integration: Used expertise in the development of financial systems to identify, formulate, design, and implement automated budget systems, machine-learning models, and artificial neural-networks to compile accurate budget submissions, increasing analyst efficiency by 20% and reducing errors by 40%.
- Web Design and Implementation: Engineered the Financial Information and Reporting System (FIRS) using Python and SQL, automating the generation of financial statements and regulatory reports, improving report accuracy by 75% and reducing generation time by 60%.
- Graphic Design: Spearheaded a mobile-first re-design of the EPA's Emergency Response public portal (www.epaosc.org) using React, Tailwind CSS, and CSS Grid/Flexbox with utility-first patterns and media-query–driven breakpoints—reduced bounce rate on smartphones by 45%, elevated Lighthouse Performance to 95+, and boosted mobile user sessions by 60%
- Regulatory Compliance: Developed a tablet-optimized field data capture PWA for EPA inspectors with offline functionality via service workers and IndexedDB, leveraging Webpack code-splitting and reducing data-entry errors by 70%, improving sync reliability to 99.5%, and accelerated form load times by 80%

Citigroup - Financial Systems Engineer

Aug 8, 2005 - Aug 7, 2007
6400 Las Colinas Blvd
Irving, TX 75039
40-hrs/week

- Application Support and Maintenance: Developed and maintained Citi's Velocity platform using C++, supporting real-time trading and market data with high-frequency trading capabilities, resulting in a 50% reduction in trade execution time and a 30% increase in transaction volume.
- Compliance Monitoring: Designed the Risk Analysis and Reporting System (RARS) to ensure compliance with Sarbanes-Oxley Section 404 requirements using Python and JavaScipt, enhancing risk assessment and mitigation by integrating anomaly-detection models, automating data analysis and risk modeling, leading to a 40% improvement in risk detection accuracy.
- Graphic Design & Stakeholder Engagement: Led a comprehensive branding overhaul, partnering with key agency staff to identify web content for the EPA's public portal for redesign under a Material-based Design System—defined color palettes, typography scales, and component libraries, then implemented design Tokens using Tailwind CSS utility classes —ensuring 100% visual consistency across the Agency's web-presence, mobile, and print, reducing design–dev handoff time by 70%
- Web Design and Implementation: Converted legacy Web Forms pages into a responsive ASP.Net MVC application styled with Material Design reducing the development cycle time for new features while significantly raising cross-device usage; integrating the final application with the Citi Mobile app for customer access to features like account management and mobile deposits, increasing user engagement by 70% and reducing in-branch transactions by 50%.
- Data Warehousing and Analytics: Developed Citi's Data Warehouse using C++ and Python, consolidating data from various sources to support advanced analytics, improving data-

driven decision-making across the organization by 50% and enhancing business intelligence capabilities.

US Air Force - Air Traffic Control Systems Engineer

Dec 7, 1998 - Aug 5, 2005
ATC Operations Center
Nakagami District, Japan
40-hrs/week

- Conflict Detection and Resolution: Implemented advanced algorithms in the Traffic Collision Avoidance System (TCAS) using Python, monitoring aircraft proximity and providing real-time alerts, reducing collision risks by 35%.
- Human-Machine Interface (HMI): Designed and developed intuitive HMIs for the Advanced Technologies and Oceanic Procedures (ATOP) system using JavaScript and ASP.NET, improving controller efficiency and reducing operational errors by 25%.
- Web-Based Applications Development: Developed and maintained the En Route Automation Modernization (ERAM) system using C# and Oracle, processing and displaying real-time radar data, reducing data latency by 40% and enhancing situational awareness for air traffic controllers.
- Conflict Detection and Resolution: Implemented advanced algorithms in the Traffic Collision Avoidance System (TCAS) using Python, monitoring aircraft proximity and providing real-time alerts, reducing collision risks by 35%.
- Weather Integration: Integrated real-time weather data into the Integrated Terminal Weather System (ITWS) using Python and SQL, predicting impacts on flight paths and reducing weather-related incidents by 30%.
- Automation and Decision Support: Led the development of the System Wide Information Management (SWIM) program with C# and SQL, automating data sharing and decision support, reducing manual workload by 40% and improving data accuracy.

Awards

Air Force Achievement Medal	2000
Global War on Terrorism Medal	2001
Air Force Longevity Medal	2004
Citigroup Star Award	2006
Smith Barney Analyst of the Year	2007
EPA Bronze Medal	2009, 2011, 2013, 2014
EPA Gold Medal	2013
EPA Silver Medal	2023

Contributions

Badger

- Badger incorporates machine learning and artificial intelligence algorithms to extract insights from large datasets by integrating Large Language Models (LLMs) on budget execution data to enhance its analytical capabilities. Users leverage LLMs for rapid information retrieval from vast datasets, automated report generation, and consultation.

Leeroy

- Leeroy is a pre-trained Large Language Model built on Meta's Llama foundation model that has been fine-tuned on public laws and explanatory statements from Public Law 104-134 (1996) to the current Continuing Resolution, budget-specific guidance such as OMB's Circular A-11, Federal Appropriations Law I & II, Title 31 Code of Federal Regulations, and the US Treasury's FASTBook (USSGL).

Baby

- An open-source, light-weight, full-featured, web-browser built in C# and released under the MIT license. Baby embraces modern web standards, and supports HTML5, JavaScript, CSS3 and HTML5 audio/video elements. 3D content is supported via WebGL which uses OpenGL/DirectX for hardware accelerated rendering. CefSharp includes embedded modules for PDF, web page printing and the WebKit Inspector (developer tools). Baby has no external dependencies, and wraps Google's Chromium Embedded Framework (Chrome).

Orca

- Orca is a HTML, CSS, and JavaScript framework for rapid web-development and the creation of ad-hoc websites. Orca makes it easy for federal analysts and federal responders to communicate essential information asynchronously across geographically remote areas of responsibility. Orca has been used during national emergencies by the EPA's Incident Management Team (IMT) to communicate mission-critical information in austere operating environments such as Hurricane Katrina to the Deep Water Horizon (DWH) response.

Budget-Py

- A proto-typing tool for exploratory data analysis using Python/Jupyter Notebooks for EPA analysts and published under the MIT license. Budget-Py uses historical budget data from the Office of Management & Budget from FY1962 to FY2024 to predict FY2025 and beyond.

Kitty

- Kitty provides production-ready boilerplate for ASP.NET Core MVC web-applications. Inspired by a crossover of Hello Kitty and Halo's Master Chief, Kitty cute and quick scaffolding with the fire-power of enterprise-grade architecture—so you can obliterate lines of boilerplate code and conquer the task at hand.

Pogi

- A GenAI & Machine-Learning pipeline for forecasting balances at the treasury account level for financial reporting. Pogi provides a pipeline for the rapid development, experimentation, visualization, and benchmarking of regression and classification models to project Treasury Account Symbol balances using active data. Project federal balances using generative ai.

Technology

Programming Languages: C, C++, C#, Pascal, Python, JavaScript, TypeScript, VBA, SQL, HTML5, and CSS3

Data Analytics: Qlik, Tableau, R-Studio, Google AI Studio, Dash, Power BI, Power Query, Dash, and Data Analysis Expressions.

Large Language Models: Ollama, OpenAI, Mistral, Groq, Llama, Gemini, Hugging face, and OpenAI.

Neural-Networking: ML.NET, Sci-Kit, SciPy, LlamaSharp, NLTK, TensorFlow, SciSharp, PyTorch, and LangChain.

Automation: ASP.NET Core, Git, Kubernetes, Docker, and n8n.

Web Development: Web Assembly (WASM), WebGL, Blazor, ASP.Net MVC, Sharepoint, Flask, Django, PHP, React, Plotly

Data Management: MS SQL Server, Oracle, PostgresSQL, SQLite, ChromaDB, Mongo, and FAISS

Education

AA	**University of Maryland**, Technology	2001
BS	**University of Maryland**, Management	2003
MS	**Sperling School of Business**, Business	2005
PhD	**NorthCentral University**, Mathematical Finance	2014