John W. Novak

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EXPERIENCE

Software Developer   November 2022 – Present
B Braun Medical Inc. – R&D Active Devices   *Allentown, PA*
- Developed a software application for tracking and monitoring an automated IV pumps on an enterprise scale, significantly alleviating workload of nurses and hospital staff, using .NET, Angular, Microsoft SQL Server.
- Significantly improved code quality of application and unit test coverage.
- Was one of 2 developers tasked with building a web application to fully simulate real IV pump hardware and interface with main application.
- Item 4

Software Developer - Contractor   February 2022 – October 2022
Barnegat Bay Capital Management   *Summit, NJ*
- Worked with owner to develop solutions to significantly speed up and automate financial analytical processes.   .
- Developed software solutions in Python to and interface with financial APIs to provide performance metrics on hundreds of small to large cap ETFs.
- Significantly improved client's Microsoft Excel workflow by providing custom VBA macros to automate various mathematical and formatting requirements.

Freelance Web Developer   January 2022 – Present
Various Clients   *Bethlehem, PA*
- Added new functionality to existing websites such as file uploading, comment section, and user login functionality.
- Utilized PostgreSQL and MySQL databases with over 5000 data entries and handled database processes with secure and efficient back-end code.

PROJECTS

AI Deep Learning Face Mask Detector | *Python, PyTorch, Pandas, Numpy*   April 2021 – June 2021
- Built a program that uses deep learning technology capable of discerning images where N95 masks are being worn on a human face against images of faces without masks with over 90% accuracy.
- Written in Python using PyTorch convolutional neural network trained with a public dataset of over 4000 images.
- Tweaked neural network architecture over time by optimizing layers, transforms and kernel size to improve results.

URP/SSP Student Research Success Tracker | *ASP.Net, C#, MySQL, JQuery*   November 2020 – April 2021
- Collaborated with a team to write a web application to automate about 80% of school research tracking workload.
- Handled thousands of research projects, students, and PIs on a relational SQL database using secure and well-tested stored procedures and back-end C# code.
- Built a custom comment system, file upload system, and user login with multiple user types and session handling.
- Provided code and detailed documentation on over 50 custom API functions.
- Worked in an agile environment with scrums, progress reports, and requirement documentation.

Custom Feature-Rich Shell/Command Line | *C, Linux, gcc, gdb*   September 2018 – January 2019
- Programmed a Unix shell / command line in C that uses the GNU / Linux glibc library for filesystem functions.
- Was capable of changing directories, copying files, executing processes with multithreading, and piping process outputs

TECHNICAL SKILLS

Languages: C#, Python, C/C++, Java, SQL (PostgreSQL/MySQL), JavaScript, PHP, XML, JSON, HTML/CSS
Frameworks: ASP.Net, Spring, Angular, React, Node.js, JQuery, Bootstrap
Developer Tools: Git, Docker, Visual Studio, Microsoft Azure, PyCharm, Linux CL, Vim, gcc, gdb
Libraries: pandas, NumPy, Matplotlib, PyTorch, OpenCV, OpenGL, glibc

EDUCATION

Temple University   Philadelphia, PA
Bachelor of Science in Information Science and Technology, Minor in Computer Science   *Graduated Dec 2021*