

# Jahn Quiz Final Cheat Sheet - Summer 2024

The final exam will cover material from the beginning of the first quiz up until 9PM PST July 6th, 2024. The final will be released at 9PM PST July 7th, 2024.

## Important Definitions

- **Operating System:** An operating system is system software that manages computer hardware and software resources, and provides common services for computer programs. Some of the most used are OS are Linux, macOS, and Windows.
- **U.S. Federal Reserve:** The Federal Reserve System is the central banking system of the United States. It was created on December 23, 1913, with the enactment of the Federal Reserve Act, after a series of financial panics led to the desire for central control of the monetary system in order to alleviate financial crises. Jerome Powell is currently the chairperson of The Fed.
- **Chiquita Brands International:** Chiquita Brands International S.à.r.l., formerly known as United Fruit Co., is a Swiss-domiciled American producer and distributor of bananas and other produce.
- **Programming Language:** A programming language is a system of notation for writing computer programs. Examples are: Python, C++, Java, Rust, JavaScript, etc.
- **NVIDIA:** Nvidia Corporation is an American multinational corporation and technology company headquartered in Santa Clara, California, and incorporated in Delaware.
- **CIA:** The Central Intelligence Agency (CIA) collects, evaluates, and disseminates vital information on economic, military, political, scientific, and other developments abroad to safeguard national security.
- **NSA:** The National Security Agency (NSA) is an intelligence agency of the United States Department of Defense, under the authority of the Director of National Intelligence (DNI). The NSA is responsible for global monitoring, collection, and processing of information and data for foreign intelligence and counter-intelligence purposes,
- **MacArthur Park:** MacArthur Park (originally Westlake Park) is a park dating back to the late 19th century in the Westlake neighborhood of Los Angeles.
- **2007-2008 Financial Crisis:** The 2007–2008 financial crisis, or the global financial crisis (GFC), was the most severe worldwide economic crisis since the Great Depression. Predatory lending in the form of sub-prime mortgages targeting low-income homebuyers, excessive risk-taking by global financial institutions, a continuous buildup of toxic assets within banks, and the bursting of the United States housing bubble culminated in a "perfect storm", which led to the Great Recession.
- **Soju:** Soju is a clear and colorless distilled alcoholic beverage, traditionally made from rice, but later from other grains and has a flavor similar to vodka. It is usually consumed neat.
- **BuzzBallz:** BuzzBallz is an American brand of pre-mixed cocktail drinks.
- **Hong Kong:** The best place to get Chinese food in Tijuana, MX.
- **Economics:** Economics is a social science that studies the production, distribution, and consumption of goods and services. Economics focuses on the behaviour and interactions of economic agents and how economies work.
- **Consultant:** A consultant is a professional who provides advice or services in an area of specialization.
- **Spirit Airlines:** Spirit Airlines, Inc., stylized as spirit, is a major American ultra-low cost airline.
- **Machine Learning:** Machine learning (ML) is a field of study in artificial intelligence concerned with the development and study of statistical algorithms that can learn from data and generalize to unseen data and thus perform tasks without explicit instructions.

## Important Formulas & Functions

- **The Jahn Function:**

$$f(x) = yap$$

- **Derivative of a Constant Function:**

Let  $c$  be a constant for the function:

$$f(x) = c$$

Then the derivative of a constant is:

$$f'(x) = 0$$

- **Upgrade to Einstein's Formula:**

$$E = mc^2 + AI$$

- **Elastic Net Regularization with Least Squares:**

$$J(\theta) = \frac{1}{2m} \sum_{i=1}^m (y_i - \hat{y}_i)^2 + \lambda \left( \alpha \sum_{j=1}^n |\theta_j| + (1 - \alpha) \sum_{j=1}^n \theta_j^2 \right)$$