

# “Transforming Healthcare in the US Virgin Islands: SDOH Insights for Education and Workforce Development”

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## Abstract

This project presents an initiative focused on enhancing healthcare equity in the US Virgin Islands by examining the influence of education and workforce development as Social Determinants of Health (SDOH) on Healthcare access and outcome.

## Introduction

Social determinants of health (SDOH) refer to the various factors in our surroundings-where we live, work, study, play, and grow older-that impact our health, wellbeing, and the chances of facing health-related challenges or improvements.

## Social Determinants of Health



## NHIT Data Fusion Center

The screenshot shows the homepage of the NHIT Data Fusion Center. It features a search bar, a navigation menu with categories like COVID-19, Reference Data, Social Determinants of Health, Telehealth, View Types, Calendars, Charts, Data Lens pages, Datasets, External Datasets, and Files and Documents. A main content area displays a "Welcome to the NHIT® Data Fusion Center!" message, featured content (e.g., "Commonly Referenced Data", "Getting Started Resources", "Stony Brook COVID 19 SDOH"), and a search bar. Below this is a section for "The Data Fusion Center has hundreds of datasets available to you - here are just a few that are commonly requested or referred to get started here." There are also links for "Want to know more about the platform? How to use it, and the resources available to you? Get started here." and "An analysis on COVID 19 data and Social Determinants of Health". At the bottom, there is a "Sort by: Most Relevant" dropdown and a "Search" button.

<https://fusioncenter.nhit.org/browse>

## Objectives

- Conducting a comprehensive analysis of SDOH in the US Virgin Islands.
- Identifying key areas where education and workforce development can be enhanced to address SDOH-related challenges (Economic Stability, Life Expectancy).
- Implementing evidence-based strategies to integrate SDOH insights into educational and workforce programs.
- Evaluating the impact of these interventions on healthcare outcomes and workforce capabilities.

## Methodology

### Data Collection:

The employment dataset utilized in this project was acquired from publicly available data provided by the "Virgin Islands Department of Labor - Labor Statistics." Educational attainment dataset has been obtained from "Annie E. Casey Foundation - Kids Count Data Center."

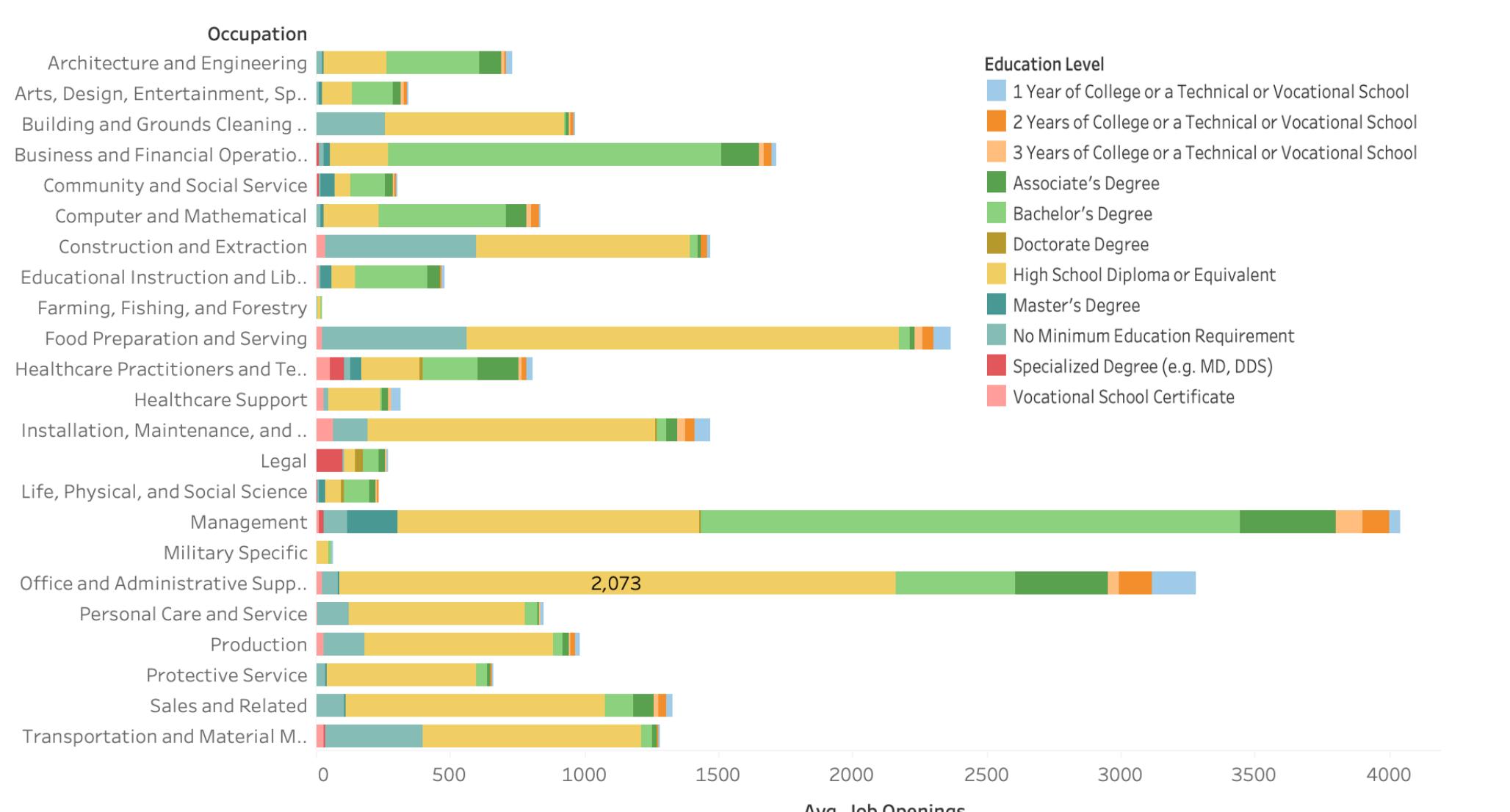
### Data Pre-processing:

Removed any nulls, duplicated entries, and irrelevant data from the dataset.

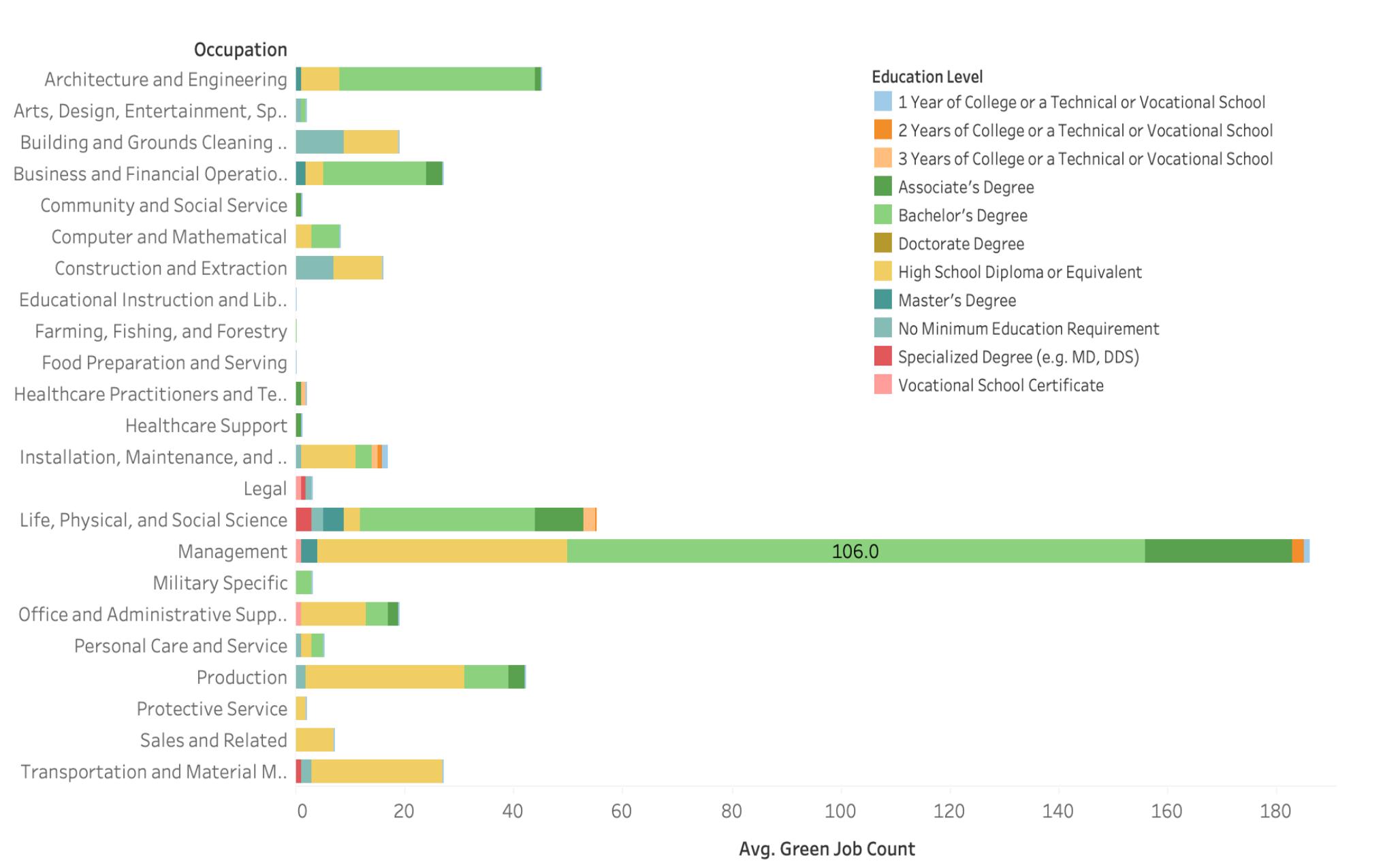
## Visualization:

Utilized Tableau, a data visualization tool, to examine the dataset. Generated multiple charts like bar graphs and line charts to detect patterns in Employment and Unemployment rates in the US Virgin Islands spanning from 1978 to 2023. Additionally, assessed the average percentage of Education attainment in St. Croix, St. John, St. Thomas, and the overall US Virgin Islands. Examined the count of job openings and green job openings across various educational levels and occupational fields.

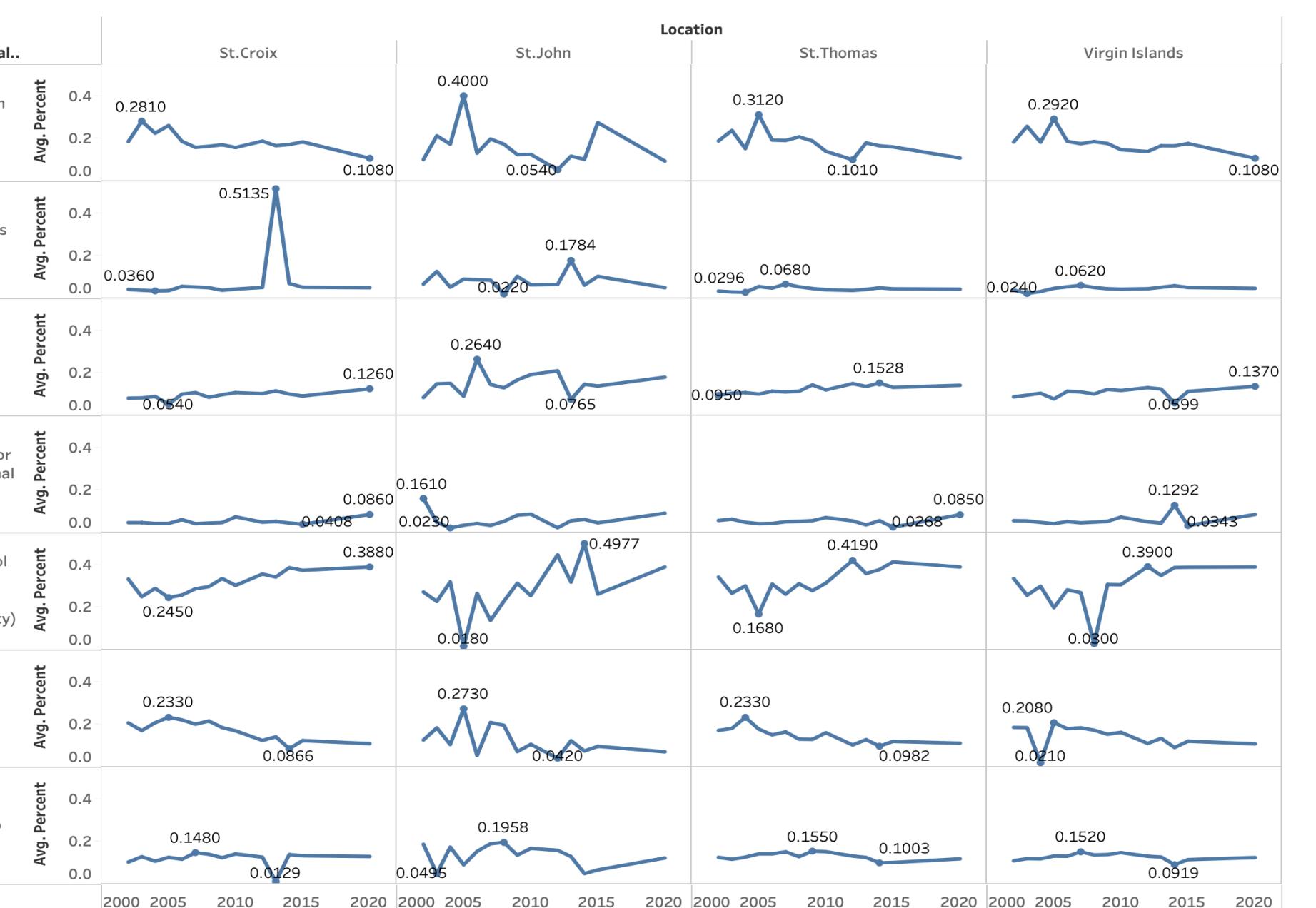
## Results



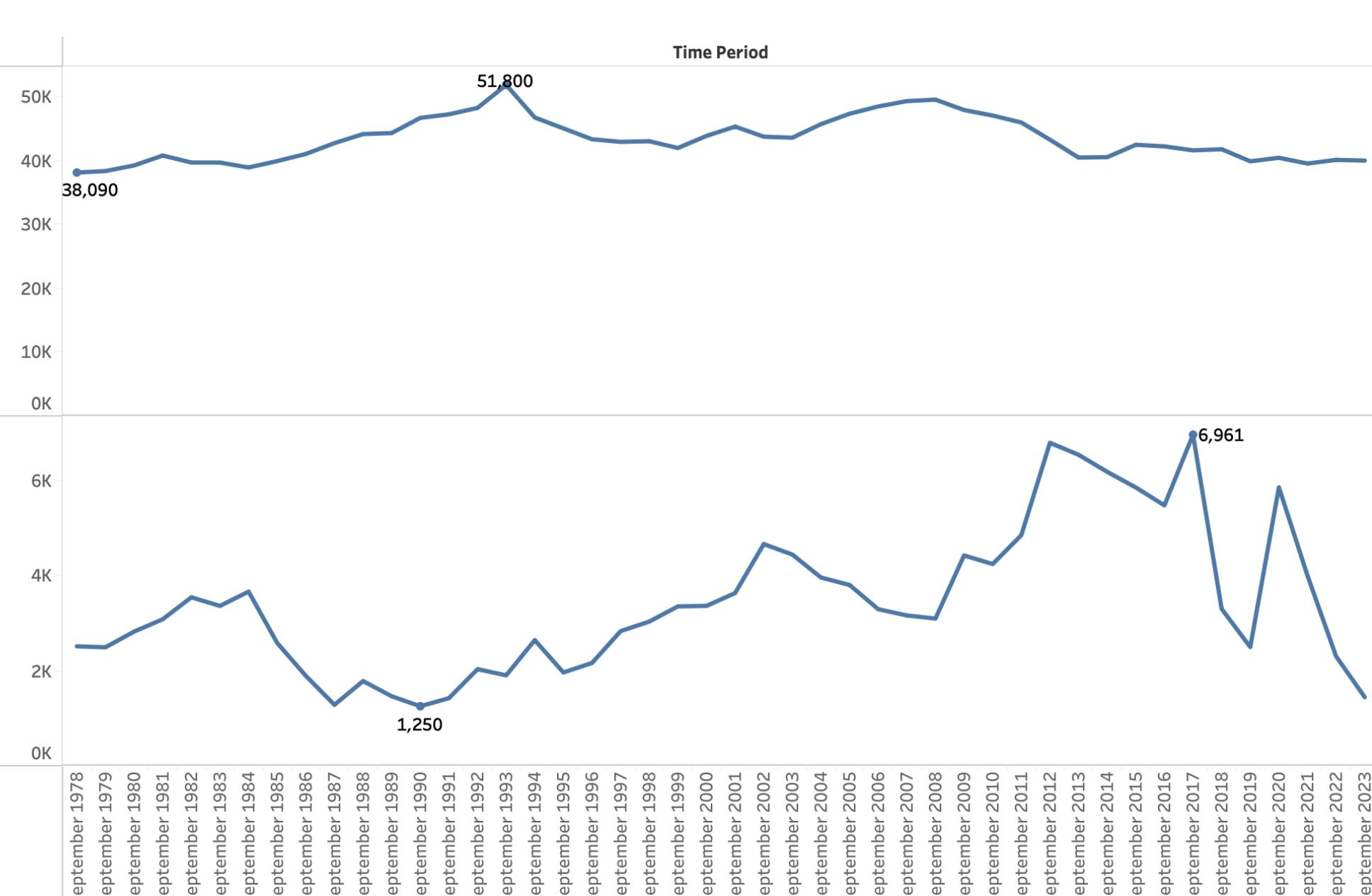
Average of Job Openings for Each Occupation in USVI



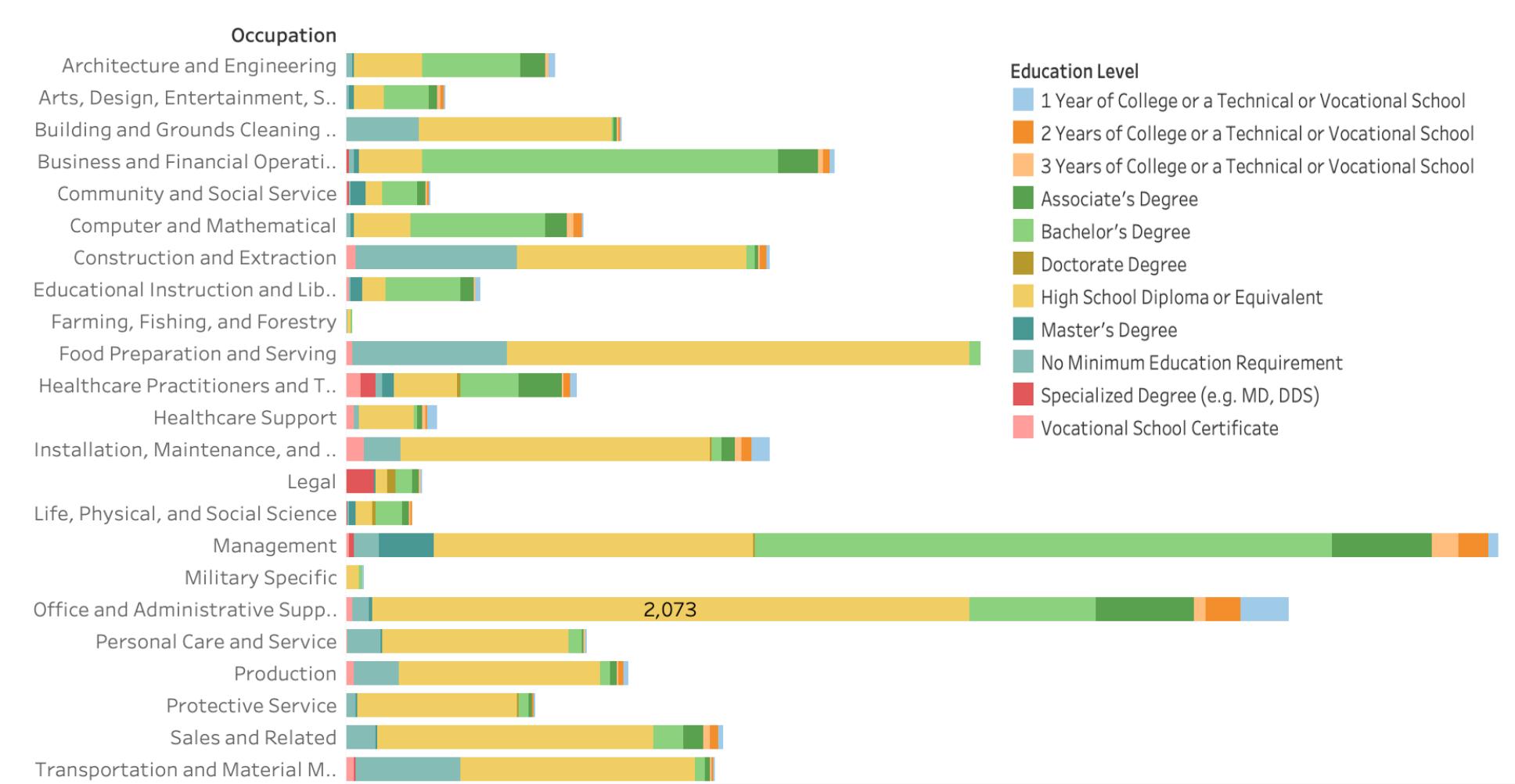
Average of Green Job Count for Each Occupation in USVI



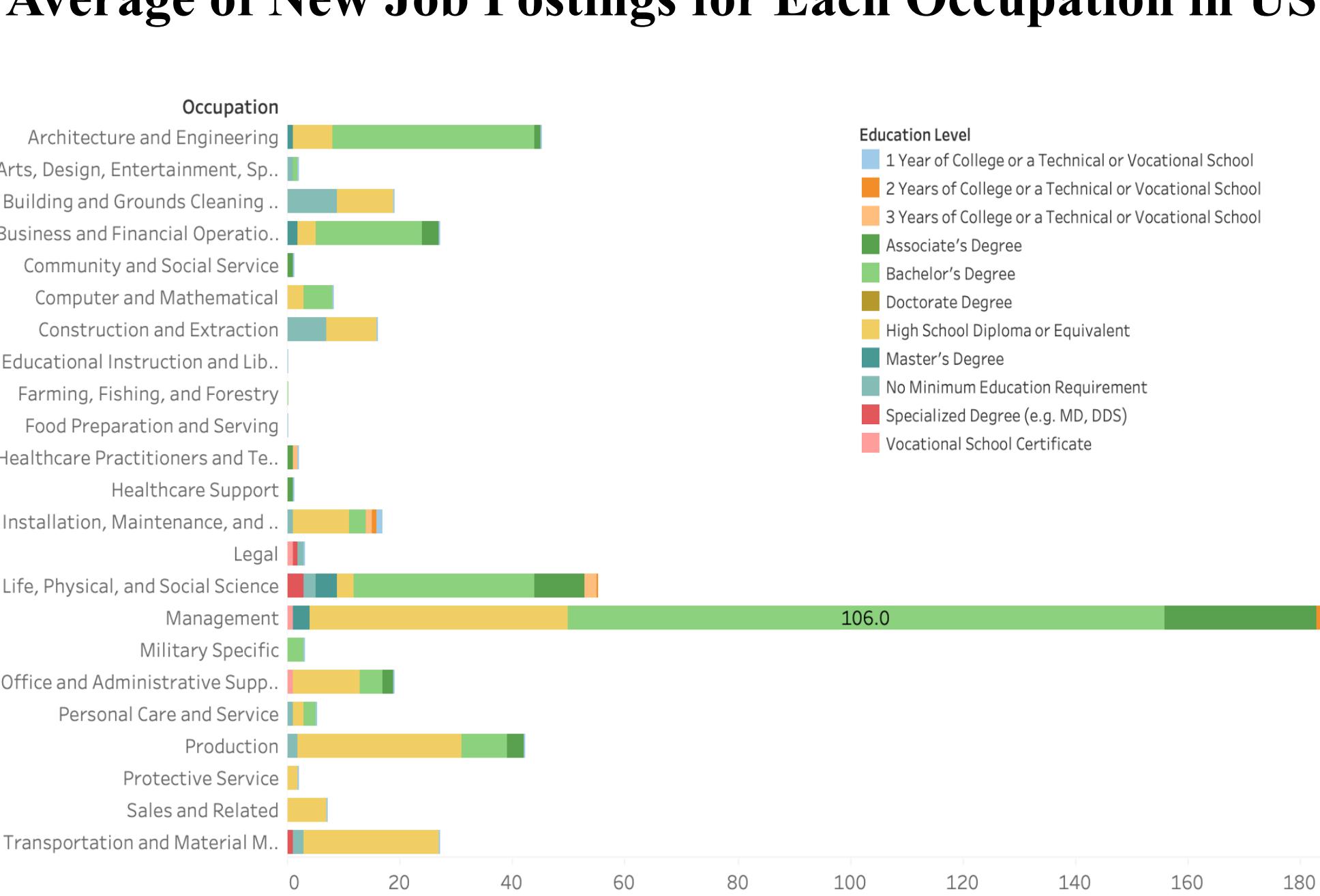
Educational Attainment as a Percentage of the Population Across Time and Place



Average Employed vs Unemployed in USVI



Average of New Job Postings for Each Occupation in USVI



Average of New Green Job Postings for Each Occupation in USVI

## Findings

- A graph representing job openings based on the educational levels attained, reveals that professions like Business Management and Finance demand a higher bachelor's degree. However, a high school degree seems to be a popular prerequisite for almost every occupation. It can be concluded that high-paying jobs most certainly prefer candidates with a professional degree. To maintain the ecosystem, it is essential that a high school degree is a necessity for exempt employment.
  - An elaborate visualization of educational attainment in all the four places in our case study along the years of 2000 to 2020 showcases the highs and lows. 2012 surely had the highest number of high school graduates in St. Thomas and USVI but St. Croix and St. John took longer to reach their peak. 2013 saw the most Associate's degrees in St. Croix and St. John. Ironically, St. Thomas and Virgin Islands experienced a dip in the same year. A Bachelor's degree does not seem to have a lot of seekers in any of the regions, yet St. John relatively peaked in 2006 but failed to maintain this status.
  - A significant graph portraying the average employment rate across 45 consecutive years reveals that 1993 had the highest average employment. The stability was maintained throughout. On the other hand, it can be observed that 2017 had the highest average unemployment, which can be attributed to the hurricanes experienced by the region.
- ## Limitations
- Data Availability
  - Generalizability
  - Complexity of SDOH
  - Local Stake