Terraform Configuration - AWS Infrastructure

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# Terraform Configuration - AWS Infrastructure

provider "aws" {
  region = "ap-northeast-2"
}

resource "aws_vpc" "main" {
  cidr_block           = "10.0.0.0/16"
  enable_dns_hostnames = true
  enable_dns_support   = true

  tags = {
    Name        = "main-vpc"
    Environment = "production"
  }
}

resource "aws_subnet" "public" {
  vpc_id                  = aws_vpc.main.id
  cidr_block              = "10.0.1.0/24"
  availability_zone       = "ap-northeast-2a"
  map_public_ip_on_launch = true

  tags = {
    Name = "public-subnet"
  }
}

resource "aws_security_group" "web" {
  name        = "web-sg"
  description = "Security group for web servers"
  vpc_id      = aws_vpc.main.id

  ingress {
    from_port   = 22
    to_port     = 22
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }

  ingress {
    from_port   = 80
    to_port     = 80
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }

  ingress {
    from_port   = 443
    to_port     = 443
    protocol    = "tcp"
    cidr_blocks = ["0.0.0.0/0"]
  }

  egress {
    from_port   = 0
    to_port     = 0
    protocol    = "-1"
    cidr_blocks = ["0.0.0.0/0"]
  }
}

resource "aws_instance" "web" {
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  ami                   = "ami-0c55b159cbfafe1f0"
  instance_type         = "t3.medium"
  subnet_id             = aws_subnet.public.id
  vpc_security_group_ids = [aws_security_group.web.id]

  tags = {
    Name = "web-server"
  }
}

output "instance_public_ip" {
  value = aws_instance.web.public_ip
}
```